Price $39.95

C.B. TUNE-UP MANUAL

MASTER EDITION

EAGLE 5000

Volume 7

Covers standard radio tune-up information
Channel modifications
Repair tips

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TABLE of CONTENTS

PAGE

Radio Tune-Up Section....4,5

TUNE-UP & PEAKING INFO for the Following:
- COBRA 19DX LTD *(Limited Edition)*....4
- COBRA 93LTD WX....4
- COBRA 148F GTL....4
- DIRLAND SS-3000B....4
- EAGLE 2000....4
- EAGLE 5000....4
- GALAXY DX 99V*(EPT 360014B Board)*....5
- GALAXY Mirage 88*(EPT 360014B Board)*....5
- MAXON MCB-60....5
- MIDLAND 77-104XL....5
- MIDLAND 75-800....5
- RANGER RCI-2980....5
- RANGER RCI-2990....5
- SUPERSTAR 3900G....5
- UNIDEN HR-2510 *(New Release)*....5
- UNIDEN PRO501XL....5
- PC76XLW....5

Correction to Volume II Page 11....6

EAGLE 2000
- Channel Conversion....7
- Channel Chart....10

EAGLE 5000
- Spec Sheet Info....11
- Channel Conversion....12

RANGER RCI-2980
- Channel Conversion....13
- Channel Chart....16

RANGER RCI-2990
- Channel Conversion....17

GALAXY DX33HML
- Channel Conversion....18
- Channel Chart....19

GALAXY DX44V
- Channel Conversion....20
- Channel Chart....22

GALAXY DX55V
- Channel Conversion....23
- Channel Chart....24

GALAXY DX99V
- Channel Conversion....25
- Channel Chart....27

PAGE

GALAXY DX77HML
- SUPER-TALK Installation Instructions....28

GALAXY DX88HL
- SUPER-TALK Installation Instructions....28

COBRA 148F-GTL *(New Malaysia Model)*
- Clarifier Slide Modification....29
- Super-Slide Clarifier Modification....30
- Switch Channel Conversion....31
- Switch Channel Conversion Freq. Chart....32
- Rotary Channel Conversion....33
- Rotary Switch Channel Conv. Freq.Chart....34

UNIDEN GRANT XL *(Update)*
- Clarifier Slide Modification Update....35
- Super-Slide Clarifier Modification Update..36

EPTOSSB50B ECHOBOARD(Connex)
- Installation Instructions....37

RADIO TRANSMIT MODIFICATION SECTION
- COBRA 25LTD WX Classic....38
- COBRA 29LTD WX Classic....38
- UNIDEN PC 66XL....38
- UNIDEN PC 76XL....38
- UNIDEN PC 76XLW....38
- UNIDEN PC 122XL....38

VARIABLE ALIGNMENT SECTION
- COBRA 19DX LTD....39
- COBRA 93LTD WX....39
- COBRA 148F GTL....39
- DIRLAND SS-3000B....39
- EAGLE 2000*(EPT 360014B Board)*....39
- EAGLE 5000*(EPT 295013Z Board)*....39
- GALAXY DX 99V*(EPT 360014B Board)*....40
- GALAXY MIRAGE 88*(EPT 360014B Board)*....40
- MAXON MCB-60....40
- MIDLAND 77-104XL....40
- RCI-2980*(EPT 360014B Board)*....40
- RCI-2990*(EPT 295013Z Board)*....40
- UNIDEN PC 76XLW....41
- UNIDEN PC 122XL....41
- UNIDEN PC 501XL....41

MIKE WIRING SECTION....41

MIKE WIRING CHARTS....42,53

INDEX....55

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CB. TUNE-UP MANUAL MASTER EDITION

VOLUME 7

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THOMAS PUBLISHING

FOREWORD

Many new radio models have been introduced since Volume 6 was released. These new models have excellent capabilities and features and incorporate much of the new integrated circuit technology now available.

One of the latest new radios just introduced, is the *EAGLE 5000*. This new model has features that you'll find on only the top of the line models. Other new models include the *EAGLE 2000, RANGER® RCI-2980, Ranger RCI-2990*, as well as models from *COBRA®, UNIDEN®, and many GALAXY Export Models*. Many of these models are included and updated in this edition.

INTRODUCTION

Improving CB. performance is often attempted by many without knowing which adjustments to use, or modifications to make. Even more frustrating is trying to remember and/or to compile this information for future use. As new radios arrive on the market it is almost impossible to acquire good easy to understand

technical and modification Info. It is our goal to supply you with good useful information in an ***easy to understand and use MANUAL FORMAT***. We feel that it is very important to supply information that will be useful and profitable for you, the technician.

Included in this volume is a complete ***Index*** listing covering ***CB TUNE-UP MANUALS Volume 1 through Volume 7***. This should be a great time saver for any future reference.

THOMAS PUBLISHING , 128 EAST WOOD PARIS, IL 61944

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HOW TO USE TUNE-UP INFORMATION

In COLUMN 1 you will find the MODEL NUMBER of each radio, COLUMN 2 provides MODULATION information, COLUMN 3 provides AM POWER ADJUSTMENTS, and COLUMN 4 lists S.S.B. ADJUSTMENTS if applicable. On some S.S.B. models we have shown 2 adjustments. The first will be for S.S.B. modulation and the second is for the S.S.B. power (ALC). If only one adjustment is shown in the SSB column then it will be for S.S.B. power (ALC).

MANUFACTURER NAME			
MODEL	MODULATION	AM POWER	SSB POWER
MCB-5000[1]	R268 or Cut D207 or Rem.C273	L202,L204	RV8,RV5
See footnote for more specific information.	Adjust R268 for modulation or cut one end of D207 or remove C273 from the circuit.	Adjust L202 & L204 for Am Power .	Adjust RV8 for SSB modulation & RV5 for SSB power.

Some of the Power Adjustments listed are expandable type coils. These coils can be adjusted by either spreading the coils apart or by moving the coils closer together. These coils can be modified by removing 1 turn in order to allow you to move them closer together if needed , and thus increase tuning range.

COBRA RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
19DX LTD	Adjust RV2 or cut one end of D8	L201	
93 LTD WX	Adjust VR3 or remove C64[1]	L2	
148F GTL	Adjust V7 or Cut R131	VR10	VR11

[1] *Removing C64 may cause feedback in some 93 LTD WX models. Normally adjusting VR3 will supply good modulation.*

DIRLAND RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
SS-3000 B[1]	Locate and Remove TR32	VR13 (Hi Pwr)VR16 (Lo Pwr)	

[1] *Model using the EPT 120112Z Circuit Board.*

EAGLE RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
Eagle 2000[1]	Adjust VR14 or cut one end of R249	VR13 (Hi Pwr)VR16 (Lo Pwr)	VR12
Eagle 5000[2]	Adjust VR14	VR13 (Hi Pwr)VR16 (Lo Pwr)	VR12

[1] *Model using the EPT 360014B Circuit Board.*
[1] *Model using the EPT 295013Z Circuit Board*

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GALAXY RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
DX 99V[1]	Adjust VR14 or remove TR53	VR13 (Hi Pwr)VR16 (Lo Pwr)	VR12
MIRAGE 88[1]	Adjust VR14 or remove TR53	VR13 (Hi Pwr)VR16 (Lo Pwr)	VR12

[1] *Model using the EPT 360014B Circuit Board.*

MAXON® RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
MCB-60	Adjust RV201 or remove C215	L304, L305, L306	

MIDLAND® RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
77-104XL[1]	Adjust VR4 or cut one end of D13	L3, L6, L7	
75-800 (Handheld)	Adjust RV3	N/A	

[1] REV A 090-681201-00 Board

RANGER RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
RCI-2980	Adjust VR14 or Cut one end of R249	VR13 (Hi Pwr)VR16 (Lo Pwr)	VR12
RCI-2990	Adjust VR14	VR13 (Hi Pwr)VR16 (Lo Pwr)	VR12

SUPER STAR RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
3900G	VR14 or Cut one end of R249	VR13	VR12

UNIDEN RADIOS			
MODEL	MODULATION	AM POWER	SSB POWER
HR2510-(New Release)	Adjust VR114	VR103	VR104
PRO501XL[1]	Cut one end of D2	L101, L102	
PC76XLW	Adjust VR4 or cut one end of D11	L12,L13,L14	

[1] New model from Uniden that utilizes a 6 pin phone type mike plug .
Color codes for the stock mike wires are as follows: Red = Audio, Black = Shield, Yellow = Receive, Green = Transmit

Notes

CHANNEL CONVERSIONS

Correction to Volume II page 11

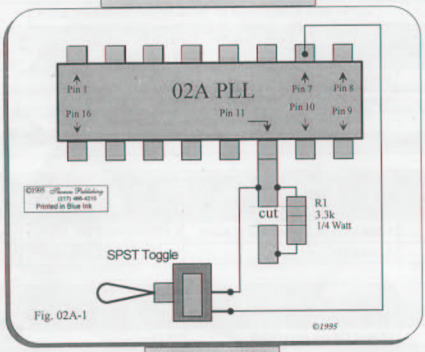
Revised Edition

Due to the many requests for Channel Modification information we have included the following chip conversions. In order to keep our manual simple and easy to understand we also decided to show most of these as individual modifications by channel group.

This will allow you to add channels by group or mix & match at will. As always this is supplied for informational purposes only.

PLL 02A LOW CHANNEL CONVERSION (#1)

View from Bottom (Foil Side of Board)



40 Channel Versions Only

Instructions

1. Locate Pin 11 and Isolate it by cutting the foil which connects it to the channel selector. Install a 3.3K 1/4 watt resistor across this cut.

2. Using a SPST mini toggle switch connect wires from the switch as shown in the above diagram. This will yield low channels starting at 26.805 and ending at 26.905 with some skips in between. This modification picks up some channels skipped by Modification #4.

LOW CHANNEL FREQUENCY CHART		
1 = 26.805	4 = 26.845	7 = 26.875
2 = 26.815	5 = 26.855	8 = 26.895
3 = 26.825	6 = 26.865	9 = 26.905

Channel Conversion Instructions

Step 1.) Turn the unit upside down with the front towards you and remove the eight screws holding the bottom cover. Set the bottom cover aside.

Step 2.) Next locate the wire (normally black) soldered to the circuit board as shown in Fig. 1. Carefully unsolder this wire and remove.

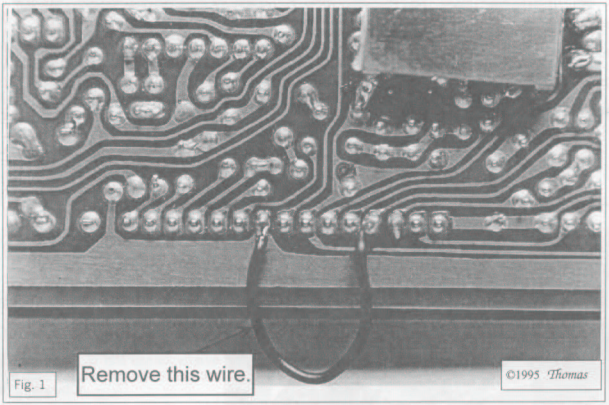


Fig. 1

Step 3.) Before proceeding, be sure that you have no solder touching on any of the pins after removing this wire. Proceed to step 4 on the next page.

Step 4.)

Now locate the solder connection as shown in Fig.2. Using solder wick, carefully desolder this connection, separating these two solder joints. Be sure that you unsolder only this connection.

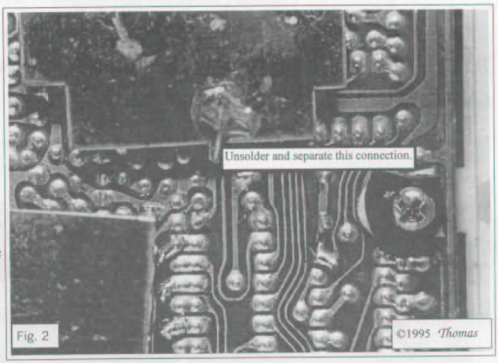


Fig. 2

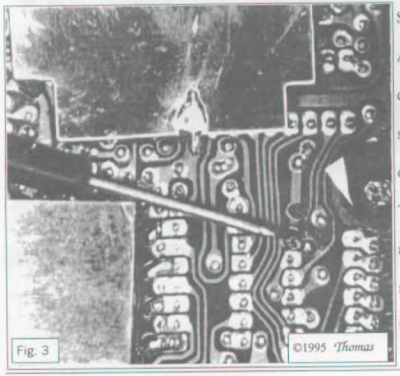
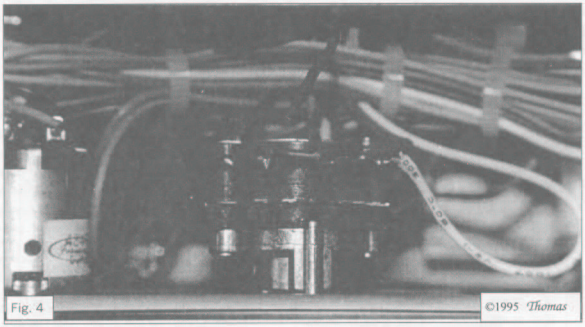


Fig. 3

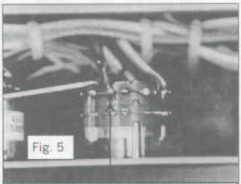
Step 5.)

After separating this connection, carefully check for any shorts or solder bridges that may have occured while performing Step 4. The connection should now appear as shown in Fig. 3 . Once you are sure that everything is ok, proceed to Step 6 on the follwing page.

Step 6.) The next step is to locate the purple wire that was left unsoldered or cut from the band selector switch at the factory. Fig. 4 below shows the band selector switch with the small stub connected to it.



Step 7.) Once you have located this wire carefully solder it to the band selector switch as shown in Fig. 5. Again take care and do not use excessive heat when resoldering this connection.



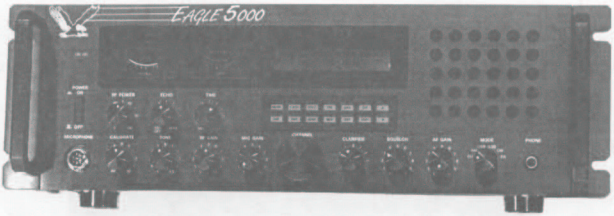
Carefully resolder the purple wire to the band select switch. Avoid excessive heat to prevent internal switch damage.

Step 8.) At this point your radio will now cover from 25.615 to 28.305 MHz as shown on the frequency chart for the Eagle 2000 on the following page.

EAGLE 2000 FREQUENCY CHANNEL CHART

A		B		C		D		E		F	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	25.615	1	26.065	1	26.515	1	26.965	1	27.415	1	27.865
2	25.625	2	26.075	2	26.525	2	26.975	2	27.425	2	27.875
3	25.635	3	26.085	3	26.535	3	26.985	3	27.435	3	27.885
4	25.655	4	26.105	4	26.555	4	27.005	4	27.455	4	27.905
5	25.665	5	26.115	5	26.565	5	27.015	5	27.465	5	27.915
6	25.675	6	26.125	6	26.575	6	27.025	6	26.475	6	27.925
7	25.685	7	26.135	7	26.585	7	27.035	7	27.485	7	27.935
8	25.705	8	26.155	8	26.605	8	27.055	8	27.505	8	27.955
9	25.715	9	26.165	9	26.615	9	27.065	9	27.515	9	27.965
10	25.725	10	26.175	10	26.625	10	27.075	10	27.525	10	27.975
11	25.735	11	26.185	11	26.635	11	27.085	11	27.535	11	27.985
12	25.755	12	26.205	12	26.655	12	27.105	12	27.555	12	28.005
13	25.765	13	26.215	13	26.665	13	27.115	13	27.565	13	28.015
14	25.775	14	26.225	14	26.675	14	27.125	14	27.575	14	28.015
15	25.785	15	26.235	15	26.685	15	27.135	15	27.585	15	28.025
16	25.805	16	26.255	16	26.705	16	27.155	16	27.605	16	28.035
17	25.815	17	26.265	17	26.715	17	27.165	17	27.615	17	28.055
18	25.825	18	26.275	18	26.725	18	27.175	18	27.625	18	28.065
19	25.835	19	26.285	19	26.735	19	27.185	19	27.635	19	28.075
20	25.855	20	26.305	20	26.755	20	27.205	20	27.655	20	28.085
21	25.865	21	26.315	21	26.765	21	27.215	21	27.665	21	28.105
22	25.875	22	26.325	22	26.775	22	27.225	22	27.675	22	28.115
23	25.905	23	26.355	23	26.805	23	27.255	23	27.705	23	28.155
24	25.885	24	26.335	24	26.785	24	27.235	24	27.685	24	28.135
25	25.895	25	26.345	25	26.795	25	27.245	25	27.695	25	28.145
26	25.915	26	26.365	26	26.815	26	27.265	26	27.715	26	28.165
27	25.925	27	26.375	27	26.825	27	27.275	27	27.725	27	28.175
28	25.935	28	26.385	28	26.835	28	27.285	28	27.735	28	28.185
29	25.945	29	26.395	29	26.845	29	27.295	29	27.745	29	28.195
30	25.955	30	26.405	30	26.855	30	27.305	30	27.755	30	28.205
31	25.965	31	26.415	31	26.865	31	27.315	31	27.765	31	28.215
32	25.975	32	26.425	32	26.875	32	27.325	32	27.775	32	28.225
33	25.985	33	26.435	33	26.885	33	27.335	33	27.785	33	28.235
34	25.995	34	26.445	34	26.895	34	27.345	34	27.795	34	28.245
35	26.005	35	26.455	35	26.905	35	27.355	35	27.805	35	28.255
36	26.015	36	26.465	36	26.915	36	27.365	36	27.815	36	28.265
37	26.025	37	26.475	37	26.925	37	27.375	37	27.825	37	28.275
38	26.035	38	26.485	38	26.935	38	27.385	38	27.835	38	28.285
39	26.045	39	26.495	39	26.945	39	27.395	39	27.845	39	28.295
40	26.055	40	26.505	40	26.955	40	27.405	40	27.855	40	28.305

EAGLE 5000



Specifications

General

Modulation Modes	CW, FM, AM, USB, LSB, PA
Frequency Range	28.000 - 29.699 MHz (Factory)
Frequency Control	Phase -Locked synthesizer
Frequency Tolerance	± 0.005 %
Frequency Stability	± 0.003 %
Operating Temperature Range	- 30 ° C to + 50° C
Microphone	Plug-in [6-pin] , 600 Ohm dynamic type
AC Input Voltage	110V 60Hz (220V 50Hz)
AC Power Consumption	300W
Antenna Connectors	Standard SO-239 type
Meter #1	Indicates relative RF power output / antenna SWR
Meter #2	Indicates received signal strength

Transmitter

Power Output	AM/FM 50W LSB/USB/CW 100W
SSB Generation	Dual-Balanced modulation
Am Modulation	Class B amplitude, collectors modulation
AM Modulation Capability	Up to 100%
FM Deviation	± 1.5KHz @ 1,250 Hz 2mV audio
Harmonic and Spurious Emission	Better than 60dB
SSB Frequency Response	400 to 3000Hz
Output Impedance	50 Ohms unbalanced
Output Indicators	RF Meter shows relative RF output power

Receiver

AM Sensitivity	1μV for 10 dB S/N
FM Sensitivity	1μV for 20 dB S/N
SSB Sensitivity	0.2μV for 10 dB S/N
AM/FM Selectivity	5 dB at 4 kHz, 50 dB at 10 kHz
SSB Selectivity	5 dB at 2 kHz
Image Rejection	More than 50 dB
IF Rejection	More than 80 dB at 455 kHZ
AGC	Change in audio output less than 12 dB from 10μV to 0.4V
Squelch	Adjustable-threshold less than 0.7μV
Audio Frequency Response	400 to 2500 Hz
Distortion	Less than 10% at 2 watts output into 8 Ohms
Adjacent Channel Rejection	>75dB
Cross Modulation	>50 dB
Intermediate Frequency	10.695 MHz [AM-1st, SSB] , 455 KHz [AM-2nd]
Clarifier Range	± 1.5 KHz
Noise Blanker	IF single gate type
Audio Output Power	More than 3 watts into 8 Ohms
Built In speaker	8 Ohms, dynamic
External Speaker (optional)	Disables internal speaker when connected

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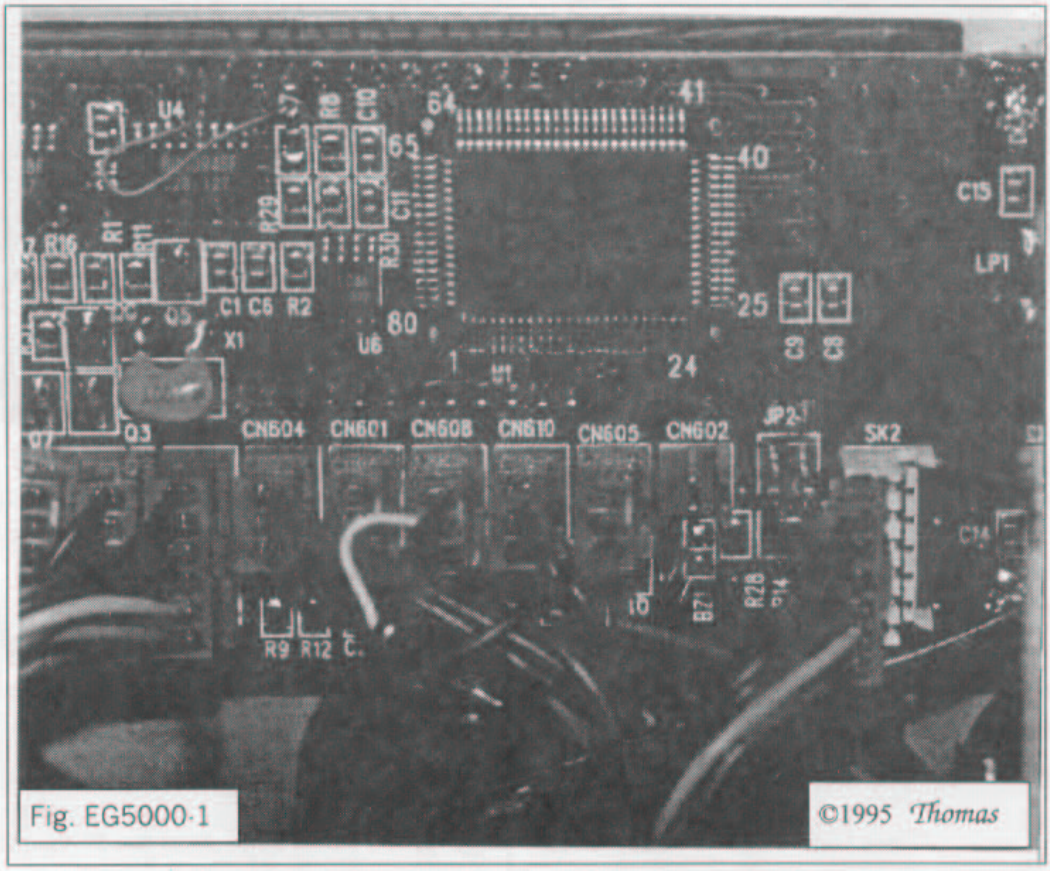


Channel Conversion Instructions

Step 1.) First remove all the screws holding the top cover and the side handle knobs in place. Remove the top cover. Next position the unit so that you are viewing it from a the rear. Locate the PC display board that is mounted to the front of the radio as shown in Fig. EG5000-1 above.

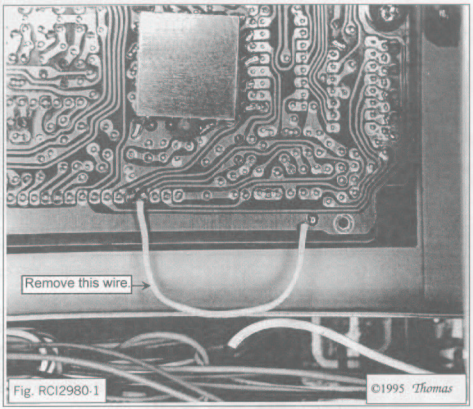
Step 2.) Next locate the Jumper labeled JP2 located in the lower right side of this board. You should find that the top pins have a jumper connector across them and the bottom pins are open. This is the standard default setup as shipped from the factory. In this configuration the radio will operate solely on the 10 Meter Amateur Band (28.0 to 29.7 MHz). The table below will provide you with more options for JP2.

JP2 Configuration	Radio Operating Range	Note
Top jumper installed , Bottom jumper *not* installed	10 Meter Amateur Band (28.0 to 29.7 MHz)	* Factory Default Setting
Both jumpers not installed	CB Band Only (26.965 to 27.405 MHz)	*Normal CB Radio Operation
Top jumper *not* installed, Bottom jumper installed	Partial Coverage (26.0 to 29.7 MHz)	
Top jumper installed and Bottom jumper installed	Full Coverage (26.0 to 32.0 MHz)	* Will need to obtain an extra jumper

Channel Conversion Instructions

Step 1.) Turn the unit upside down with the front towards you and remove the eight screws holding the bottom cover. Set the bottom cover aside.

Step 2.) Next locate the wire (normally white) soldered to the circuit board as shown in Fig. RCI2980-1 below. Carefully unsolder this wire and remove.



Step 3.) Before proceeding, be sure that you have no solder touching on any of the pins after removing this wire. Proceed to step 4 on the next page.

Note: *Wire color may vary in some versions. However the instructions for conversion remains the same.*

Step 4.)

Now locate the solder connection as shown in Fig. RCI2980-2. Using solder wick, carefully desolder this connection, separating these two solder joints. Be sure that you unsolder only the connection between these two pins. Proceed to Step 5 below.

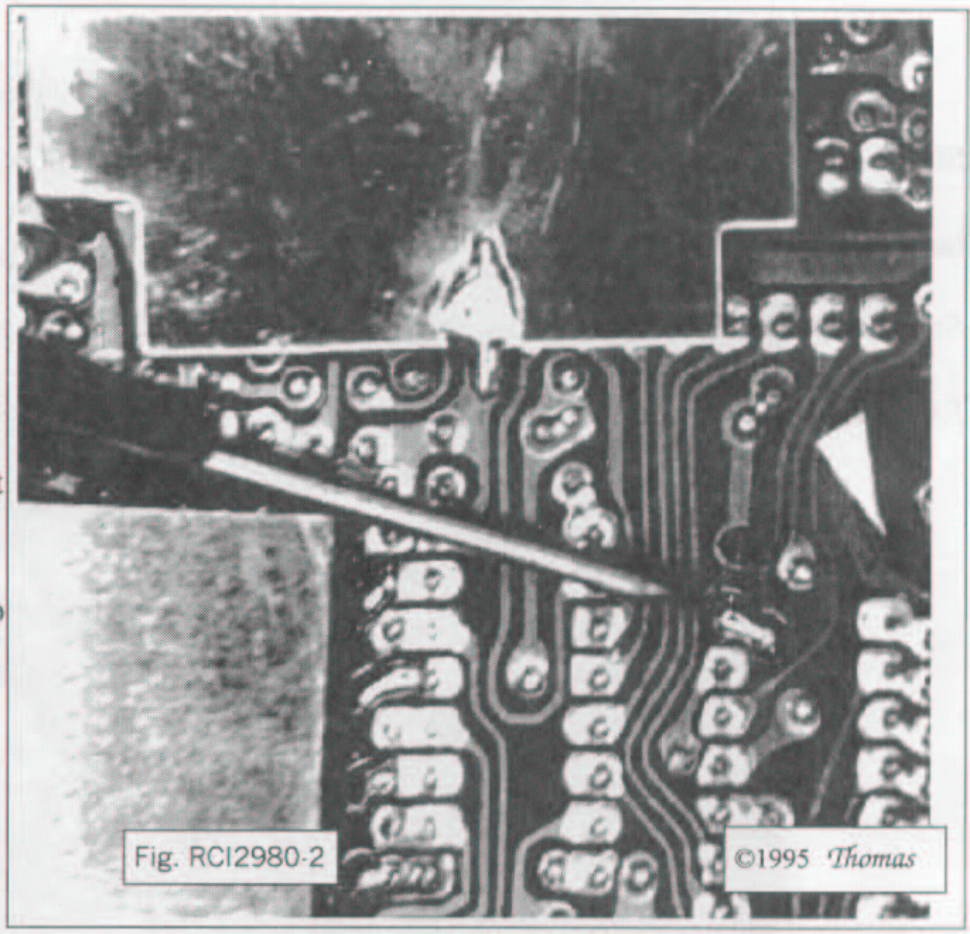


Fig. RCI2980-2

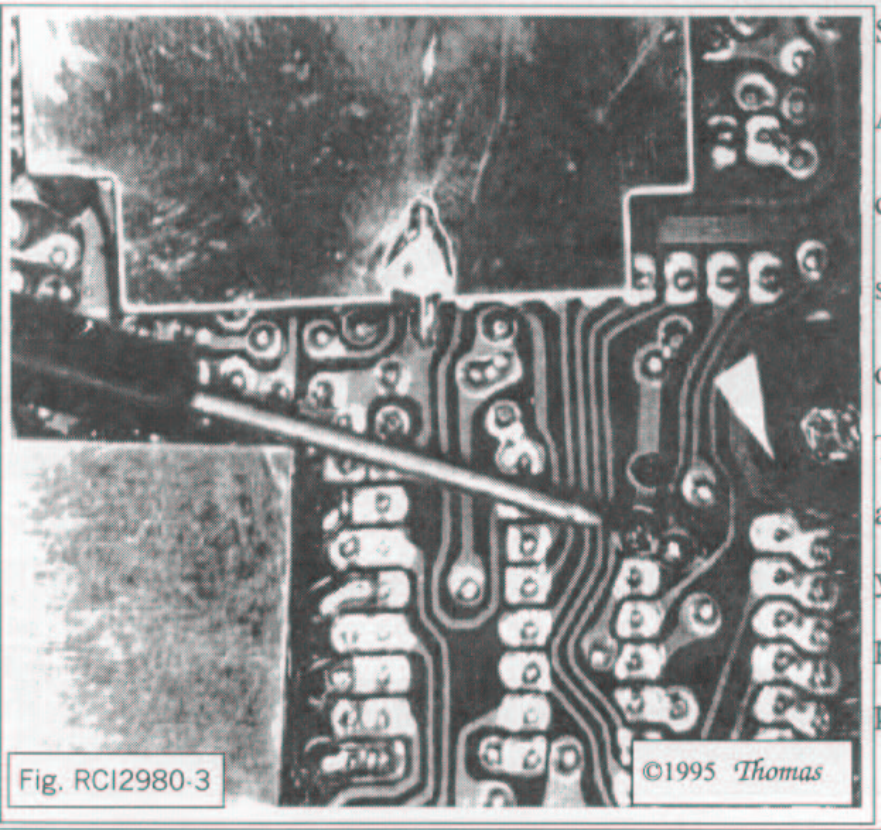


Fig. RCI2980-3

Step 5.)

After separating this connection, carefully check for any shorts or solder bridges that may have occured while performing Step 4. The connection should now appear as shown in Fig. RCI2980-3 . Once you are sure that everything is ok, proceed to Step 6 on the follwing page.

Step 6.) The next step is to locate the purple wire that was left unsoldered or cut from the band selector switch at the factory. Fig. RCI2980-4 below shows the band selector switch with the small stub connected to it.

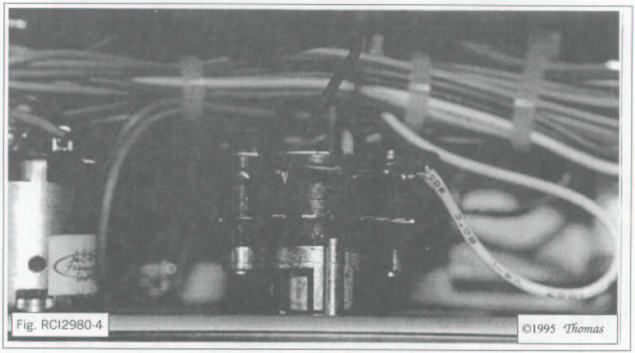


Fig. RCI2980-4 ©1995 *Thomas*

Step 7.) Once you have located this wire carefully solder it to the band selector switch as shown in Fig. RCI2980-5. Again take care and do not use excessive heat when resoldering this connection.

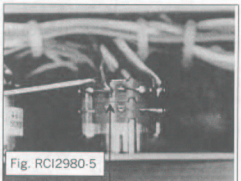


Fig. RCI2980-5

Carefully resolder the purple wire to the band select switch. Avoid excessive heat to prevent internal switch damage.

Step 8.) At this point your radio will now cover from 25.615 to 28.305 MHz as shown on the frequency chart for the RCI-2980 on the following page.

RCI-2980 FREQUENCY CHANNEL CHART

A		B		C		D		E		F	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	25.615	1	26.065	1	26.515	1	26.965	1	27.415	1	27.865
2	25.625	2	26.075	2	26.525	2	26.975	2	27.425	2	27.875
3	25.635	3	26.085	3	26.535	3	26.985	3	27.435	3	27.885
4	25.655	4	26.105	4	26.555	4	27.005	4	27.455	4	27.905
5	25.665	5	26.115	5	26.565	5	27.015	5	27.465	5	27.915
6	25.675	6	26.125	6	26.575	6	27.025	6	26.475	6	27.925
7	25.685	7	26.135	7	26.585	7	27.035	7	27.485	7	27.935
8	25.705	8	26.155	8	26.605	8	27.055	8	27.505	8	27.955
9	25.715	9	26.165	9	26.615	9	27.065	9	27.515	9	27.965
10	25.725	10	26.175	10	26.625	10	27.075	10	27.525	10	27.975
11	25.735	11	26.185	11	26.635	11	27.085	11	27.535	11	27.985
12	25.755	12	26.205	12	26.655	12	27.105	12	27.555	12	28.005
13	25.765	13	26.215	13	26.665	13	27.115	13	27.565	13	28.015
14	25.775	14	26.225	14	26.675	14	27.125	14	27.575	14	28.015
15	25.785	15	26.235	15	26.685	15	27.135	15	27.585	15	28.025
16	25.805	16	26.255	16	26.705	16	27.155	16	27.605	16	28.035
17	25.815	17	26.265	17	26.715	17	27.165	17	27.615	17	28.055
18	25.825	18	26.275	18	26.725	18	27.175	18	27.625	18	28.065
19	25.835	19	26.285	19	26.735	19	27.185	19	27.635	19	28.075
20	25.855	20	26.305	20	26.755	20	27.205	20	27.655	20	28.085
21	25.865	21	26.315	21	26.765	21	27.215	21	27.665	21	28.105
22	25.875	22	26.325	22	26.775	22	27.225	22	27.675	22	28.115
23	25.905	23	26.355	23	26.805	23	27.255	23	27.705	23	28.155
24	25.885	24	26.335	24	26.785	24	27.235	24	27.685	24	28.135
25	25.895	25	26.345	25	26.795	25	27.245	25	27.695	25	28.145
26	25.915	26	26.365	26	26.815	26	27.265	26	27.715	26	28.165
27	25.925	27	26.375	27	26.825	27	27.275	27	27.725	27	28.175
28	25.935	28	26.385	28	26.835	28	27.285	28	27.735	28	28.185
29	25.945	29	26.395	29	26.845	29	27.295	29	27.745	29	28.195
30	25.955	30	26.405	30	26.855	30	27.305	30	27.755	30	28.205
31	25.965	31	26.415	31	26.865	31	27.315	31	27.765	31	28.215
32	25.975	32	26.425	32	26.875	32	27.325	32	27.775	32	28.225
33	25.985	33	26.435	33	26.885	33	27.335	33	27.785	33	28.235
34	25.995	34	26.445	34	26.895	34	27.345	34	27.795	34	28.245
35	26.005	35	26.455	35	26.905	35	27.355	35	27.805	35	28.255
36	26.015	36	26.465	36	26.915	36	27.365	36	27.815	36	28.265
37	26.025	37	26.475	37	26.925	37	27.375	37	27.825	37	28.275
38	26.035	38	26.485	38	26.935	38	27.385	38	27.835	38	28.285
39	26.045	39	26.495	39	26.945	39	27.395	39	27.845	39	28.295
40	26.055	40	26.505	40	26.955	40	27.405	40	27.855	40	28.305

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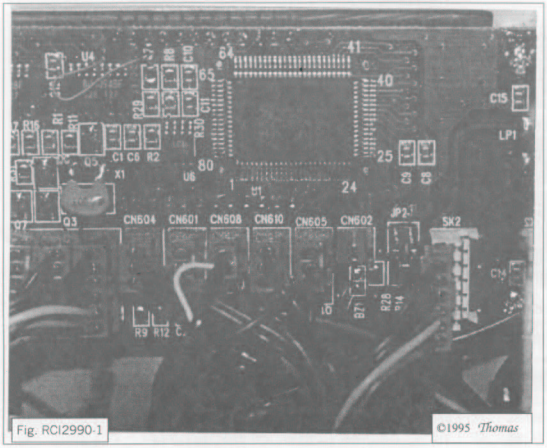


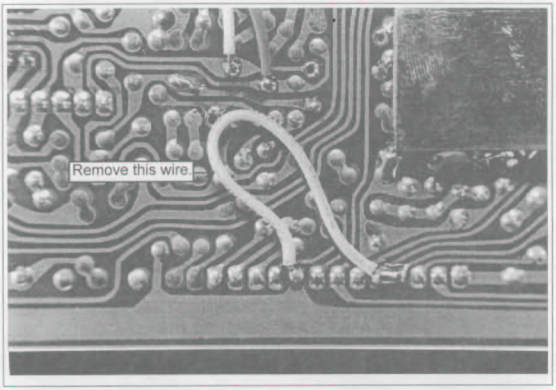
Fig. RCI2990-1

Channel Conversion Instructions

Step 1.) First remove all the screws holding the top cover and the side handle knobs in place. Remove the top cover. Next position the unit so that you are viewing it from a the rear. Locate the PC display board that is mounted to the front of the radio as shown in Fig. RCI2990-1 above.

Step 2.) Next locate the Jumper labeled JP2 located in the lower right side of this board. You should find that the top pins have a jumper connector across them and the bottom pins are open. This is the standard default setup as shipped from the factory. In this configuration the radio will operate solely on the 10 Meter Amateur Band (28.0 to 29.7 MHz). The table below will provide you with more options for JP2.

JP2 Configuration	Radio Operating Range	Note
Top jumper installed , Bottom jumper *not* installed	10 Meter Amateur Band (28.0 to 29.7 MHz)	* Factory Default Setting
Both jumpers not installed	CB Band Only (26.965 to 27.405 MHz)	*Normal CB Radio Operation
Top jumper *not* installed, Bottom jumper installed	Partial Coverage (26.0 to 29.7 MHz)	
Top jumper installed and Bottom jumper installed	Full Coverage (26.0 to 32.0 MHz)	* Will need to obtain an extra jumper



Channel Conversion Instructions

Step 1.) Remove the screws holding the covers in place . Remove the top cover and set aside.

Step 2.) Next locate the wire (normally white) soldered to the circuit board as shown in Fig. 33HML above. Carefully unsolder this wire and remove.

Step 3.) Before proceeding, be sure that you have no solder touching on any of the pins after removing this wire. Your radio will now cover from 26.615 to 28.215 as shown in the channel chart on the following page.

Note: *Wire color may vary in some versions. However the instructions for conversion remains the same.*

GALAXY DX 33HML FREQUENCY CHANNEL CHART

LOW BAND						HIGH BAND					
A-Band		B-Band		C-Band		D-Band		E-Band		F-Band	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	25.615	1	26.065	1	26.515	1	26.965	1	27.415	1	27.865
2	25.625	2	26.075	2	26.525	2	26.975	2	27.425	2	27.875
3	25.635	3	26.085	3	26.535	3	26.985	3	27.435	3	27.885
4	25.655	4	26.105	4	26.555	4	27.005	4	27.455	4	27.905
5	25.665	5	26.115	5	26.565	5	27.015	5	27.465	5	27.915
6	25.675	6	26.125	6	26.575	6	27.025	6	26.475	6	27.925
7	25.685	7	26.135	7	26.585	7	27.035	7	27.485	7	27.935
8	25.705	8	26.155	8	26.605	8	27.055	8	27.505	8	27.955
9	25.715	9	26.165	9	26.615	9	27.065	9	27.515	9	27.965
10	25.725	10	26.175	10	26.625	10	27.075	10	27.525	10	27.975
11	25.735	11	26.185	11	26.635	11	27.085	11	27.535	11	27.985
12	25.755	12	26.205	12	26.655	12	27.105	12	27.555	12	28.005
13	25.765	13	26.215	13	26.665	13	27.115	13	27.565	13	28.015
14	25.775	14	26.225	14	26.675	14	27.125	14	27.575	14	28.015
15	25.785	15	26.235	15	26.685	15	27.135	15	27.585	15	28.025
16	25.805	16	26.255	16	26.705	16	27.155	16	27.605	16	28.035
17	25.815	17	26.265	17	26.715	17	27.165	17	27.615	17	28.055
18	25.825	18	26.275	18	26.725	18	27.175	18	27.625	18	28.065
19	25.835	19	26.285	19	26.735	19	27.185	19	27.635	19	28.075
20	25.855	20	26.305	20	26.755	20	27.205	20	27.655	20	28.085
21	25.865	21	26.315	21	26.765	21	27.215	21	27.665	21	28.105
22	25.875	22	26.325	22	26.775	22	27.225	22	27.675	22	28.115
23	25.905	23	26.355	23	26.805	23	27.255	23	27.705	23	28.155
24	25.885	24	26.335	24	26.785	24	27.235	24	27.685	24	28.135
25	25.895	25	26.345	25	26.795	25	27.245	25	27.695	25	28.145
26	25.915	26	26.365	26	26.815	26	27.265	26	27.715	26	28.165
27	25.925	27	26.375	27	26.825	27	27.275	27	27.725	27	28.175
28	25.935	28	26.385	28	26.835	28	27.285	28	27.735	28	28.185
29	25.945	29	26.395	29	26.845	29	27.295	29	27.745	29	28.195
30	25.955	30	26.405	30	26.855	30	27.305	30	27.755	30	28.205
31	25.965	31	26.415	31	26.865	31	27.315	31	27.765	31	28.215
32	25.975	32	26.425	32	26.875	32	27.325	32	27.775	32	28.225
33	25.985	33	26.435	33	26.885	33	27.335	33	27.785	33	28.235
34	25.995	34	26.445	34	26.895	34	27.345	34	27.795	34	28.245
35	26.005	35	26.455	35	26.905	35	27.355	35	27.805	35	28.255
36	26.015	36	26.465	36	26.915	36	27.365	36	27.815	36	28.265
37	26.025	37	26.475	37	26.925	37	27.375	37	27.825	37	28.275
38	26.035	38	26.485	38	26.935	38	27.385	38	27.835	38	28.285
39	26.045	39	26.495	39	26.945	39	27.395	39	27.845	39	28.295
40	26.055	40	26.505	40	26.955	40	27.405	40	27.855	40	28.305

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GALAXY DX 44U
CHANNEL CONVERSION

Step 1. Remove the radio case and locate the small circuit board (*EPT004410Z* board) connected to the left side of the radio as viewed from the component side.

Step 2. Once you have located this small circuit board, locate the wire (*usually white, but wire color may vary*) that is soldered to the back of this board. Either unsolder or cut one end of this wire loose from the board and seal the end with some small heat shrinkable tubing . This needs to be done in order to prevent this wire from ever causing a short, or possibly other damage to your radio. Or you may remove this wire completely.

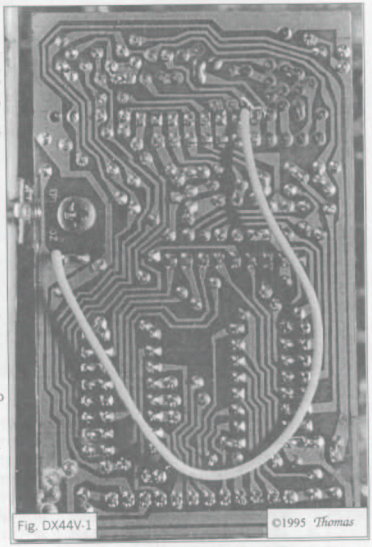


Fig. DX44V-1 ©1995 *Thomas*

Step 3. Next look down past the channel board and to the right and locate the 3 pin plug as shown in the Fig. DX44V-2. This plug is normally labeled +10KHz and not connected at the factory. Once located carefully re-install and then proceed to Step 4 on the next page.

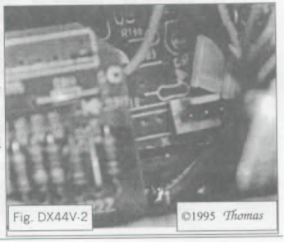
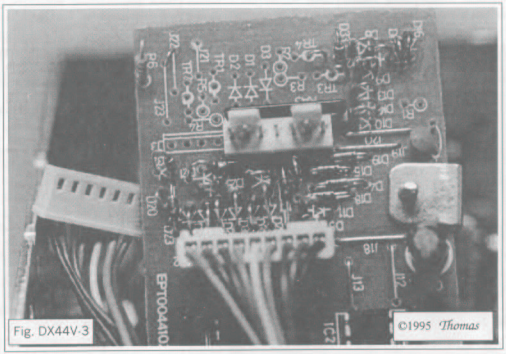
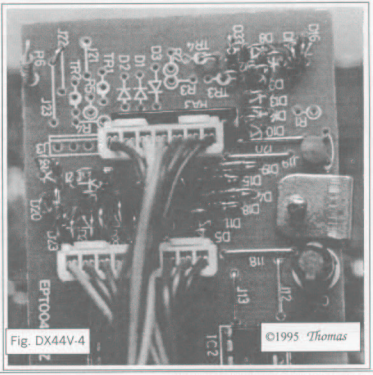


Fig. DX44V-2 ©1995 *Thomas*



4. Next you will need to remove the small screw that holds this board to the radio case. Carefully turn this board so as to gain access to the component side.



5. Under this board you will find a 7 pin plug that was not connected at the factory. Carefully plug this connector to the board as shown in Fig. DX44V-3. Be sure the plug is plugged in properly and well seated. That's it. Your radio will now cover all channels & all bands as shown in the channel chart on the following page.

GALAXY DX 44U FREQUENCY CHANNEL CHART

LO BAND								HI BAND							
A		B		C		D		E		F		G		H	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	25.165	1	25.615	1	26.065	1	26.515	1	26.965	1	27.415	1	27.865	1	28.315
2	25.175	2	25.625	2	26.075	2	26.525	2	26.975	2	27.425	2	27.875	2	28.325
3	25.185	3	25.635	3	26.085	3	26.535	3	26.985	3	27.435	3	27.885	3	28.335
4	25.205	4	25.655	4	26.105	4	26.555	4	27.005	4	27.455	4	27.905	4	28.355
5	25.215	5	25.665	5	26.115	5	26.565	5	27.015	5	27.465	5	27.915	5	28.365
6	25.225	6	25.675	6	26.125	6	26.575	6	27.025	6	27.475	6	27.925	6	28.375
7	25.235	7	25.685	7	26.135	7	26.585	7	27.035	7	27.485	7	27.935	7	28.385
8	25.255	8	25.705	8	26.155	8	26.605	8	27.055	8	27.505	8	27.955	8	28.405
9	25.265	9	25.715	9	26.165	9	26.615	9	27.065	9	27.515	9	27.965	9	28.415
10	25.275	10	25.725	10	26.175	10	26.625	10	27.075	10	27.525	10	27.975	10	28.425
11	25.285	11	25.735	11	26.185	11	26.635	11	27.085	11	27.535	11	27.985	11	28.435
12	25.305	12	25.755	12	26.205	12	26.655	12	27.105	12	27.555	12	28.005	12	28.455
13	25.315	13	25.765	13	26.215	13	26.665	13	27.115	13	27.565	13	28.015	13	28.465
14	25.325	14	25.775	14	26.225	14	26.675	14	27.125	14	27.575	14	28.015	14	28.475
15	25.335	15	25.785	15	26.235	15	26.685	15	27.135	15	27.585	15	28.025	15	28.485
16	25.355	16	25.805	16	26.255	16	26.705	16	27.155	16	27.605	16	28.035	16	28.505
17	25.365	17	25.815	17	26.265	17	26.715	17	27.165	17	27.615	17	28.055	17	28.515
18	25.375	18	25.825	18	26.275	18	26.725	18	27.175	18	27.625	18	28.065	18	28.525
19	25.385	19	25.835	19	26.285	19	26.735	19	27.185	19	27.635	19	28.075	19	28.535
20	25.405	20	25.855	20	26.305	20	26.755	20	27.205	20	27.655	20	28.085	20	28.555
21	25.415	21	25.865	21	26.315	21	26.765	21	27.215	21	27.665	21	28.105	21	28.565
22	25.425	22	25.875	22	26.325	22	26.775	22	27.225	22	27.675	22	28.115	22	28.575
23	25.455	23	25.905	23	26.355	23	26.805	23	27.255	23	27.705	23	28.155	23	28.605
24	25.435	24	25.885	24	26.335	24	26.785	24	27.235	24	27.685	24	28.135	24	28.585
25	25.445	25	25.895	25	26.345	25	26.795	25	27.245	25	27.695	25	28.145	25	28.595
26	25.465	26	25.915	26	26.365	26	26.815	26	27.265	26	27.715	26	28.165	26	28.615
27	25.475	27	25.925	27	26.375	27	26.825	27	27.275	27	27.725	27	28.175	27	28.625
28	25.485	28	25.935	28	26.385	28	26.835	28	27.285	28	27.735	28	28.185	28	28.635
29	25.495	29	25.945	29	26.395	29	26.845	29	27.295	29	27.745	29	28.195	29	28.645
30	25.505	30	25.955	30	26.405	30	26.855	30	27.305	30	27.755	30	28.205	30	28.655
31	25.515	31	25.965	31	26.415	31	26.865	31	27.315	31	27.765	31	28.215	31	28.665
32	25.525	32	25.975	32	26.425	32	26.875	32	27.325	32	27.775	32	28.225	32	28.675
33	25.535	33	25.985	33	26.435	33	26.885	33	27.335	33	27.785	33	28.235	33	28.685
34	25.545	34	25.995	34	26.445	34	26.895	34	27.345	34	27.795	34	28.245	34	28.695
35	25.555	35	26.005	35	26.455	35	26.905	35	27.355	35	27.805	35	28.255	35	28.705
36	25.565	36	26.015	36	26.465	36	26.915	36	27.365	36	27.815	36	28.265	36	28.715
37	25.575	37	26.025	37	26.475	37	26.925	37	27.375	37	27.825	37	28.275	37	28.725
38	25.585	38	26.035	38	26.485	38	26.935	38	27.385	38	27.835	38	28.285	38	28.735
39	25.595	39	26.045	39	26.495	39	26.945	39	27.395	39	27.845	39	28.295	39	28.745
40	25.605	40	26.055	40	26.505	40	26.955	40	27.405	40	27.855	40	28.305	40	28.755

NOTES

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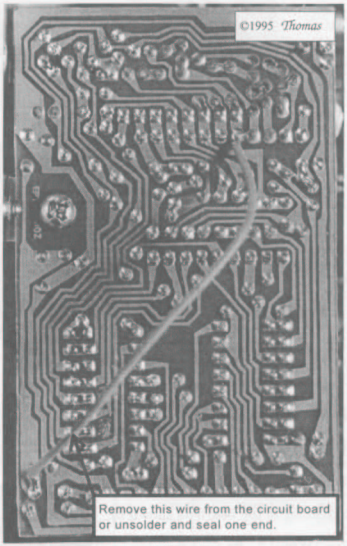
1. Remove the radio case and locate the small circuit board (*EPT004410Z* board) connected to the left side of the radio as viewed from the component side.

2. Once you have located this small circuit board, locate the wire (*usually orange, but wire color may vary*) that is soldered to the back of this board. Either unsolder or cut one end of this wire loose from the board and seal the end with some small heat shrinkable tubing . This needs to be done in order to prevent this wire from ever causing a short, or possibly other damage to your radio. Or you may remove this wire completely.



Remove this wire from the circuit board or unsolder and seal one end.

3. Next you will need to remove the small screw that this board to the radio case. Carefully turn this board so as to gain access to the component side.

Note: *Wire color may vary in some versions. However the instructions for conversion remains the same.*

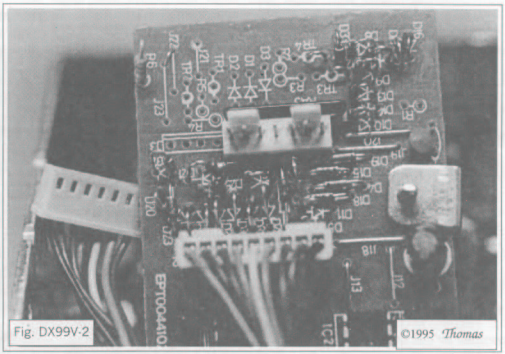


Fig. DX99V-2

4. Under this board you will find a 7 pin plug that was not connected at the factory. Carefully plug this connector to the board as shown in Fig. DX99V-3. Be sure the plug is plugged in properly and well seated. That's it. Your radio will now cover all channels & all bands as shown in the channel chart on the following Page.

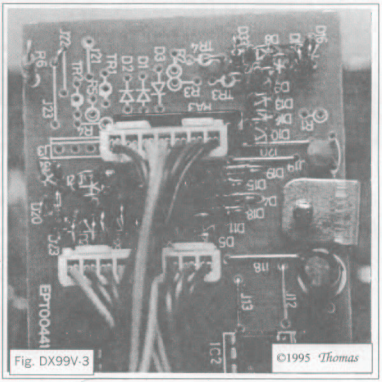


Fig. DX99V-3

GALAXY DX 99U FREQUENCY CHANNEL CHART

LO BAND								HI BAND							
A		B		C		D		E		F		G		H	
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	25.165	1	25.615	1	26.065	1	26.515	1	26.965	1	27.415	1	27.865	1	28.315
2	25.175	2	25.625	2	26.075	2	26.525	2	26.975	2	27.425	2	27.875	2	28.325
3	25.185	3	25.635	3	26.085	3	26.535	3	26.985	3	27.435	3	27.885	3	28.335
4	25.205	4	25.655	4	26.105	4	26.555	4	27.005	4	27.455	4	27.905	4	28.355
5	25.215	5	25.665	5	26.115	5	26.565	5	27.015	5	27.465	5	27.915	5	28.365
6	25.225	6	25.675	6	26.125	6	26.575	6	27.025	6	26.475	6	27.925	6	28.375
7	25.235	7	25.685	7	26.135	7	26.585	7	27.035	7	27.485	7	27.935	7	28.385
8	25.255	8	25.705	8	26.155	8	26.605	8	27.055	8	27.505	8	27.955	8	28.405
9	25.265	9	25.715	9	26.165	9	26.615	9	27.065	9	27.515	9	27.965	9	28.415
10	25.275	10	25.725	10	26.175	10	26.625	10	27.075	10	27.525	10	27.975	10	28.425
11	25.285	11	25.735	11	26.185	11	26.635	11	27.085	11	27.535	11	27.985	11	28.435
12	25.305	12	25.755	12	26.205	12	26.655	12	27.105	12	27.555	12	28.005	12	28.455
13	25.315	13	25.765	13	26.215	13	26.665	13	27.115	13	27.565	13	28.015	13	28.465
14	25.325	14	25.775	14	26.225	14	26.675	14	27.125	14	27.575	14	28.015	14	28.475
15	25.335	15	25.785	15	26.235	15	26.685	15	27.135	15	27.585	15	28.025	15	28.485
16	25.355	16	25.805	16	26.255	16	26.705	16	27.155	16	27.605	16	28.035	16	28.505
17	25.365	17	25.815	17	26.265	17	26.715	17	27.165	17	27.615	17	28.055	17	28.515
18	25.375	18	25.825	18	26.275	18	26.725	18	27.175	18	27.625	18	28.065	18	28.525
19	25.385	19	25.835	19	26.285	19	26.735	19	27.185	19	27.635	19	28.075	19	28.535
20	25.405	20	25.855	20	26.305	20	26.755	20	27.205	20	27.655	20	28.085	20	28.555
21	25.415	21	25.865	21	26.315	21	26.765	21	27.215	21	27.665	21	28.105	21	28.565
22	25.425	22	25.875	22	26.325	22	26.775	22	27.225	22	27.675	22	28.115	22	28.575
23	25.455	23	25.905	23	26.355	23	26.805	23	27.255	23	27.705	23	28.155	23	28.605
24	25.435	24	25.885	24	26.335	24	26.785	24	27.235	24	27.685	24	28.135	24	28.585
25	25.445	25	25.895	25	26.345	25	26.795	25	27.245	25	27.695	25	28.145	25	28.595
26	25.465	26	25.915	26	26.365	26	26.815	26	27.265	26	27.715	26	28.165	26	28.615
27	25.475	27	25.925	27	26.375	27	26.825	27	27.275	27	27.725	27	28.175	27	28.625
28	25.485	28	25.935	28	26.385	28	26.835	28	27.285	28	27.735	28	28.185	28	28.635
29	25.495	29	25.945	29	26.395	29	26.845	29	27.295	29	27.745	29	28.195	29	28.645
30	25.505	30	25.955	30	26.405	30	26.855	30	27.305	30	27.755	30	28.205	30	28.655
31	25.515	31	25.965	31	26.415	31	26.865	31	27.315	31	27.765	31	28.215	31	28.665
32	25.525	32	25.975	32	26.425	32	26.875	32	27.325	32	27.775	32	28.225	32	28.675
33	25.535	33	25.985	33	26.435	33	26.885	33	27.335	33	27.785	33	28.235	33	28.685
34	25.545	34	25.995	34	26.445	34	26.895	34	27.345	34	27.795	34	28.245	34	28.695
35	25.555	35	26.005	35	26.455	35	26.905	35	27.355	35	27.805	35	28.255	35	28.705
36	25.565	36	26.015	36	26.465	36	26.915	36	27.365	36	27.815	36	28.265	36	28.715
37	25.575	37	26.025	37	26.475	37	26.925	37	27.375	37	27.825	37	28.275	37	28.725
38	25.585	38	26.035	38	26.485	38	26.935	38	27.385	38	27.835	38	28.285	38	28.735
39	25.595	39	26.045	39	26.495	39	26.945	39	27.395	39	27.845	39	28.295	39	28.745
40	25.605	40	26.055	40	26.505	40	26.955	40	27.405	40	27.855	40	28.305	40	28.755

NOTES

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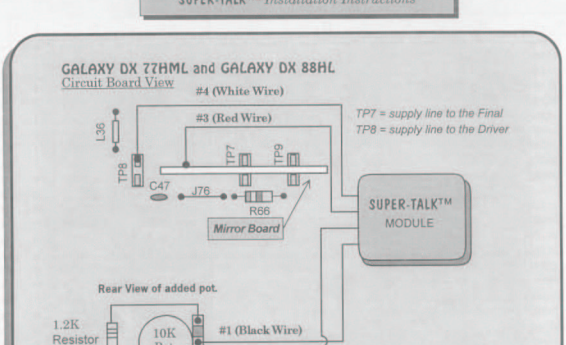

Fig. DX 88HL

Installation Instructions

1. Locate the mirror board that connects TP9, TP8, and TP7 in the final section. Next slide this board to the right until it no longer makes a connection with TP8. Then solder the #4 white wire to the TP8 terminal and solder the #3 red wire directly to the side of the mirror board. Make sure that your solder connections are good and solid.

2. Next mount a 10K miniature pot in a convenient location and solder the other two wires of the SUPER-TALK module as shown and add the 1.2K resistor. Once completed you will have full variable power with excellent modulation capabilities.

Note: This SUPER-TALK installation is basically the same for many other Export and Domestic CB radios with the removable mirror board. It is important however that when you slide the mirror board over that it does not short against any other components. If you find that this is the case , insulate the end of the board with some electrical tape before proceeding with the installation.

COBRA® 148F-GTL

(New Frequency Counter Model)

Clarifier Modification

In the diagram below (Fig 148FCLS) we have shown the stock COBRA® 148F-GTL clarifier circuit before modification for reference. In Fig. 148FCLM we have shown the same circuit after the clarifier circuit has been modified. This New Version is made in Malaysia and is no longer manufactured by Uniden.

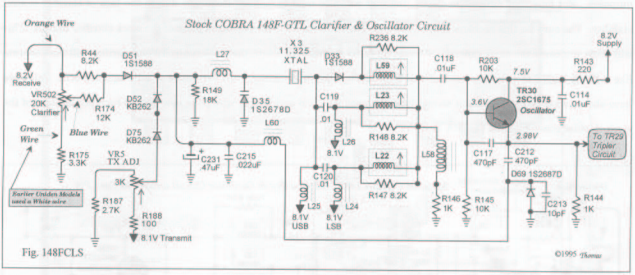

Fig. 148FCLS

Modification Instructions

1. Locate D52 and R44 just to the right of the large 11.325 xtal in the clarifier circuit and cut one end as shown below. It doesn't matter which end of R44 and D52 you cut. Next locate R174 (12K Resistor) directly behind R44 and unsolder and remove it from the circuit. Next solder a jumper wire in place of R174.

2. Next trace the Green wire form the clarifier control to where it is soldered to the circuit board near C110, and cut it loose. Resolder the Green wire to the circuit board ground.

3. Next trace the Orange wire from the clarifier control and unsolder it from the circuit board. At this point you will need to add a small amount of wire to the orange wire in order to make it long enough to reach pin 3 of IC4 (MB3756 Regulator IC). IC4 is mounted to the side of the radio case about two inches back from the MIC socket. Now solder this wire to pin 3 IC4. Pin 3 of IC4 (3rd pin from the back of the radio) has no other connections. Your clarifier will now track on receive and transmit.

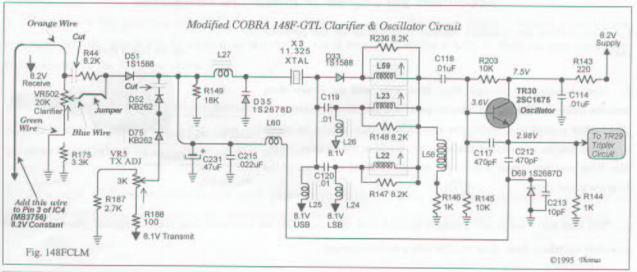

Fig. 148FCLM

COBRA® 148F-GTL

(New Frequency Counter Model)

Super Slide Modification

In most cases once the clarifier circuit has been modified, the stock clarifier control is just not adequate for all practical purposes. Not only is it difficult to clarify, the unit will also tend to drift off frequency due to the lack of clarifier control stability. The cure for this problem is to install a 10-Turn Precision Potentiometer in place of the stock clarifier control. This will allow you cover the same range in 10 complete turns versus 1 turn with the stock control. Your clarifier will then operate like a FINE TUNE clarifier control and will have much improved stability, with very little or no frequency drift. Below we have shown what the above circuit should look like once modified and how to wire your new 20k-10 turn pot in place of the stock clarifier control for the COBRA 148F-GTL.

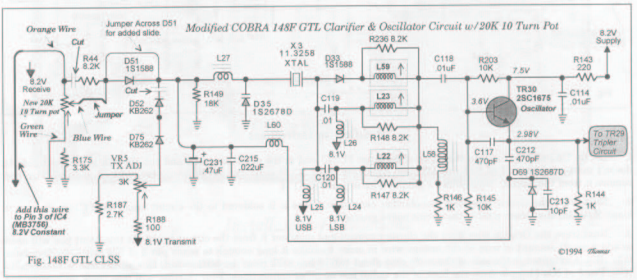

Fig. 148F GTL CLSS

20K-10 Turn Pot Diagram & Installation Instructions

1. First perform the standard clarifier modification on the previous page.

2. Next unsolder the Orange Wire, Blue Wire, and the Green Wire from the stock clarifier control. At this point you will need to remove the old clarifier control and install the new 20K-10 turn pot in its place. Once that you have mounted the new pot, resolder the Orange Wire , Blue Wire, and the Green Wire to the new 10 turn pot as shown in the diagram to the right.

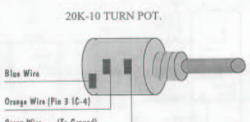

Fig. Pot-GTL

3. You may also want to add a jumper either across or in place D51 for increased slide. Once completed, your unit should now slide anywhere from 10 to 20 KHz with precision control.

COBRA® 148F-GTL

(New Frequency Counter Model)

Switch Channel Conversion

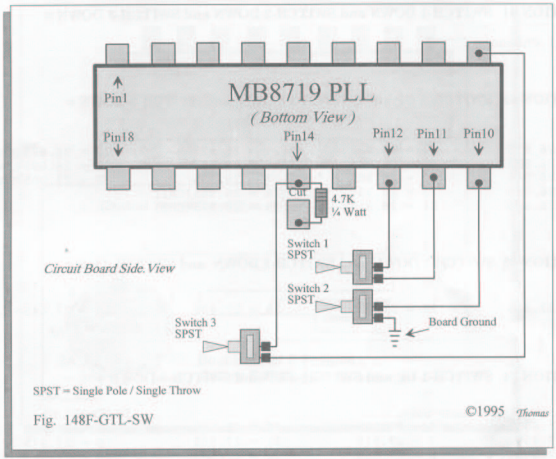

Fig. 148F-GTL-SW

148F-GTL Channel Conversion Instructions

1. First locate Pin 14 of the MB8719 PLL chip on the bottom side of the circuit board. Using a ex-acto knife, carefully cut and isolate Pin 14 away from the circuit board run. Next solder a 4.7K ¼ Watt resistor across this cut as shown in the diagram above.

2. Next mount 3 SPST Toggle switches in a convenient location . Be sure to wire the switches up as shown , and to solder each wire carefully. Once all the wires have been soldered to the switches and to the circuit board as shown, check all solder joints before proceeding.

3. Now with all three switches in the down position you will still have the normal channels. Refer to the Cobra 148F-GTL Channel chart on the following page for the switch positions and their associated channels.

COBRA 148F-GTL

(New Frequency Counter Model)

Switch Channel Chart

POSITION #1 SWITCH-1 DOWN and SWITCH-2 DOWN and SWITCH-3 DOWN =

Normal Channels

POSITION #2 SWITCH-1 UP and SWITCH-2 DOWN and SWITCH-3 DOWN =

15 = 26.815	20 = 26.885	25 = 26.925	30 = 26.985(Ch3)
16 = 26.835	21 = 26.895	26 = 26.945	31 = 26.995(3A)
17 = 26.845	22 = 26.905	27 = 26.955	32 = 27.005(Ch4)
18 = 26.855	23 = 26.935	28 = 26.965(Ch1)	
19 = 26.865	24 = 26.915	29 = 26.975(Ch2)	

POSITION #3 SWITCH-1 DOWN and SWITCH-2 DOWN and SWITCH-3 UP =

37 = 27.415	38 = 27.425	39 = 27.435	40 = 27.445

POSITION #4 SWITCH-1 UP and SWITCH-2 UP and SWITCH-3 DOWN =

1 = 27.605	6 = 27.505	10 = 27.555	14 = 27.605
2 = 27.455	7 = 27.515	11 = 27.565	16 = 27.475
3 = 27.465	8 = 27.535	12 = 27.585	20 = 27.525
4 = 27.485	9 = 27.545	13 = 27.595	23 = 27.575
5 = 27.495			

POSITION #5 SWITCH-1 DOWN and SWITCH-2 UP and SWITCH-3 DOWN =

1 = 27.605	11 = 27.725	21 = 27.855	31 = 27.955
2 = 27.615	12 = 27.745	22 = 27.865	32 = 27.965
3 = 27.625	13 = 27.755	23 = 27.895	33 = 27.975
4 = 27.645	14 = 27.765	24 = 27.875	34 = 27.985
5 = 27.655	15 = 27.775	25 = 27.885	35 = 27.995
6 = 27.665	16 = 27.795	26 = 27.905	36 = 28.005
7 = 27.675	17 = 27.805	27 = 27.915	37 = 28.015
8 = 27.695	18 = 27.815	28 = 27.925	38 = 28.025
9 = 27.705	19 = 27.825	29 = 27.935	39 = 28.035
10 = 27.715	20 = 27.845	30 = 27.945	40 = 28.045

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COBRA® 148F-GTL

(New Frequency Counter Model)

Rotary Switch Channel Conversion

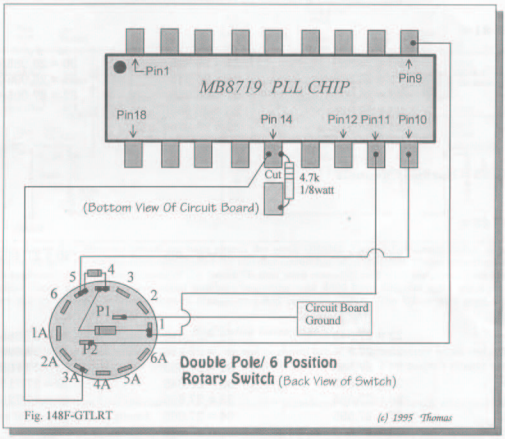


Fig. 148F-GTLRT

(c) 1995 Thomas

Rotary Switch Channel Conversion Instructions

1. Obtain a Double Pole / 6 Position Rotary Switch. Be sure to get the Break Before Make type. You will also need 2 small signal diodes (1N914, 1N4148 or Equivalent), a piece of 5 wire ribbon cable long enough to reach from the switch to the PLL chip connections, and 1 / 4.7k 1/4 watt resistor. Next solder the diodes to the switch as shown in the diagram above. Be sure that the cathode ends (Banded) are as shown once you have completed this step. The diode that connects between Pin 4 & Pin 5 should have the banded end to Pin 4 and the diode the connects between Pin 1 & Pin 4 should also have the banded end to Pin 4.

2. Next locate Pin 14 of the PLL and using an ex-acto knife carefully isolate Pin 14 as shown above. Next solder the 4.7k resistor across this cut in order to allow Pin 14 to operate at its normal state. Once this has been done you may connect the ribbon cable to switch - prior to mounting in its permanent location. Be sure that the wires are connected as shown in the above diagram. Once that you have mounted the switch you may then make the connections to the PLL chip as shown above . Re-check all your connections before turning the unit on . The channel chart on the next page shows your new frequencies. Check all positions of the switch for these channels. Some adjustment of the VCO coil (L19) may be necessary in some cases for full channel coverage.

COBRA® 148F-GTL

(New Malaysia Model)

Rotary Switch Channel Chart

POSITION #1 =

15 = 26.815	20 = 26.885	25 = 26.925	30 = 26.985(Ch3)
16 = 26.835	21 = 26.895	26 = 26.945	31 = 26.995(3A)
17 = 26.845	22 = 26.905	27 = 26.955	32 = 27.005(Ch4)
18 = 26.855	23 = 26.935	28 = 26.965(Ch1)	
19 = 26.865	24 = 26.915	29 = 26.975(Ch2)	

POSITION #2 = Normal Channels

POSITION #3 =

37 = 27.415	38 = 27.425	39 = 27.435	40 = 27.445

POSITION #4 =

15 = 27.455	22 = 27.545	29 = 27.615	36 = 27.685
16 = 27.465	23 = 27.575	30 = 27.625	37 = 27.695
17 = 27.475	24 = 27.555	31 = 27.635	38 = 27.705
18 = 27.495	25 = 27.565	32 = 27.645	39 = 27.715
19 = 27.505	26 = 27.585	33 = 27.655	40 = 27.725
20 = 27.525	27 = 27.595	34 = 27.665	
21 = 27.535	28 = 27.605	35 = 27.675	

POSITION #5 =

1 = 27.605	11 = 27.725	21 = 27.855	31 = 27.955
2 = 27.615	12 = 27.745	22 = 27.865	32 = 27.965
3 = 27 625	13 = 27.755	23 = 27.895	33 = 27.975
4 = 27.645	14 = 27.765	24 = 27.375	34 = 27.985
5 = 27.655	15 = 27.775	25 = 27.885	35 = 27.995
6 = 27.665	16 = 27.795	26 = 27.905	36 = 28.005
7 = 27.675	17 = 27.805	27 = 27.915	37 = 28.015
8 = 27.695	18 = 27.815	28 = 27.925	38 = 28.025
9 = 27.705	19 = 27.825	29 = 27.935	39 = 28.035
10 = 27.715	20 = 27.845	30 = 27.945	40 = 28.045

POSITION #6 = Normal Channels

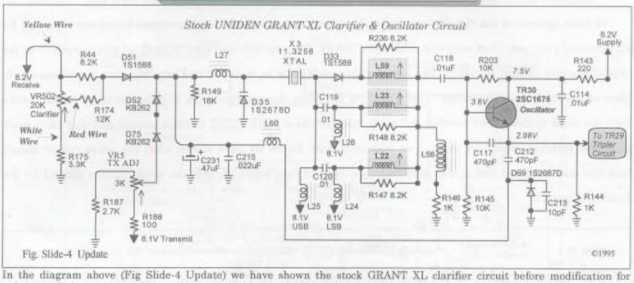


Fig. Slide-4 Update

In the diagram above (Fig Slide-4 Update) we have shown the stock GRANT XL clarifier circuit before modification for reference. Below we have shown the same circuit after the clarifier circuit has been modified. Please note that these updated modifications apply only to the later versions of the Grant-XL that were manufactured with serial numbers beginning with the 4500 series. Later models that have serial numbers beginning with 4500 have different color wires on the clarifier control. They are as follows , Yellow instead of orange, and Red instead of Blue. The White wire is the same in both versions.

Modification Instructions

1. Locate D52 and R44 in the clarifier circuit and cut one end as shown below. It doesn't matter which end of R44 and D52 you cut. Next locate R174 (12K Resistor) and unsolder and remove it from the circuit. Next solder a jumper wire in place of R174.

2. Next trace the White wire form the clarifier control to where it is soldered to the circuit board, and cut it loose. Resolder the white wire to the circuit board ground.

3. Next trace the Yellow wire from the clarifier control and unsolder it from the circuit board. At this point you will need to add a small amount of wire to the yellow wire in order to make it long enough to reach pin 3 of IC4 (MB3756 Regulator IC). Now solder this wire to pin 3 of IC4. Your clarifier will now track on receive and transmit.

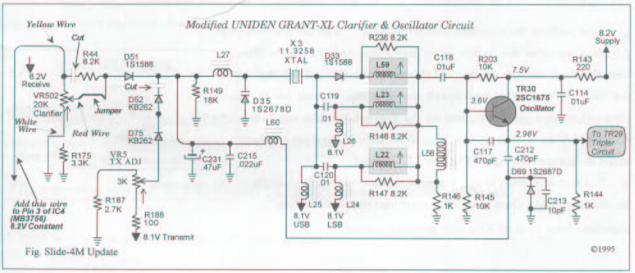
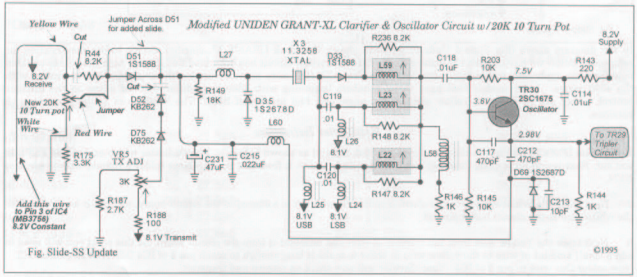


Fig. Slide-4M Update

UNIDEN GRANT-XL

Super Slide Clarifier Modification Update

In most cases once the clarifier circuit has been modified, the stock clarifier control is just not adequate for all practical purposes. Not only is it difficult to clarify, the unit will also tend to drift off frequency due to the lack of clarifier control stability. The cure for this problem is to install a 10-Turn Precision Potentiometer in place of the stock clarifier control. This will allow you cover the same range in 10 complete turns versus 1 turn with the stock control. Your clarifier will then operate like a FINE TUNE clarifier control and will have much improved stability, with very little or no frequency drift. Below we have shown what the above circuit should look like once modified and how to wire your new 20k- 10 turn pot in place of the stock clarifier control for the Uniden Grant XL.

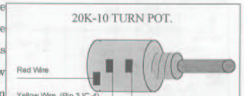


20K-10 Turn Pot Diagram & Installation Instructions

1. First perform the standard clarifier modification on the previous page.

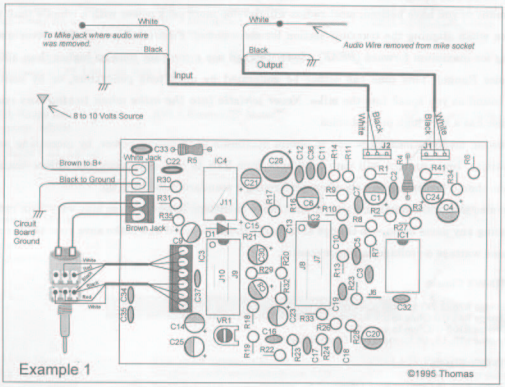
2. Next unsolder the Yellow Wire, Red Wire, and the White Wire from the stock clarifier control. At this point you will need to remove the old clarifier control and install the new 20K-10 turn pot in its place. Once that you have mounted the new pot, resolder the Yellow Wire , Red Wire, and the White Wire to the new 10 turn pot as shown in the diagram to the right (*Fig. Pot-XL Update*).

3. You may also want to add a jumper either across or in place D51 for increased slide. Once completed, your unit should now slide anywhere from 10 to 20 KHz with precision control.



EPTOSSB50B ECHOBOARD INSTALLATION INSTRUCTIONS

Caution: This is an 8 to 10 volt Echo Board. 12 volt hookup will cause Echo override and feedback .



1.) Hook the brown wire from the Echo Board to 8 to 10 volt source while the radio is in transmit mode. If you are unable to locate an 8 to 10 volt transmit source you may need to use a higher voltage source such as a 11 to 13.8 volt transmit source which will require a dropping resistor in series with the brown wire to provide an 8 to 10 volt source. A 1K (½ watt) resistor will drop 13.8 volts to about 8.7 volts. You must maintain an 8 to 10 volt source for proper operation of your Echo Board.

2.) Hook the Black wire from the Echo Board to Radio PC Board Ground.

3.) Locate and unsolder the Audio wire from the mike socket. Next hook the white wire from the Echo Board (J2) to the pin on the mike socket at this point. *(See Example 1 above.)*

4.) Hook the white wire from the Echo Board (J1) to the wire that was unhooked from the mike socket.

5.) Hook both shields from J1 & J2 to the PC board ground.

RADIO TRANSMIT MODIFICATION SECTION

As many of you have noticed, most radios will develop more peak power with a whistle than when using normal voice when aligning the transmit section for more power. First of all you should never use a whistle when tuning for maximum forward (*PEAK*) power. Instead use a constant tone no higher than 300 to 400 Hz (Normal Voice Range). This tone can either be generated by most tone generators, or by using a steady ah-h-h-h-h sound as you speak into the mike. ***Never whistle into the mike when tuning any radio***, unless your customer has a very high pitched voice.

The following modifications allow you to obtain maximum peak output power, by increasing normal voice range sensitivity. Improvement will vary anywhere from 25% to 50% depending the radios' circuitry. These modifications should be performed only after performing a standard radio tune-up.

We have also shown the nominal value of most parts to change, however these may vary from radio to radio. When replacing any parts be sure to change or use only those specified and make sure your replacement has at least the same wattage or voltage rating or greater.

Cobra 25 LTD-WX Classic

1. Change R76 (2.2K) to a 1K. *(Located near mike socket)*
2. Change R43 (10 Ohm) to a 2.7 Ohm.
3. Change R108 (1 Ohm) to a .47 Ohm.
4. Re-tune L10, L9, L8 for maximum Forward Power.

Cobra 29LTD-WX Classic

1. Change R58 (8 Ohm) to a 2.7 Ohm
2. Change R123 (1 Ohm) to a .47 Ohm
3. Re-Tune L14, L13, L12 for maximum Forward Power

Uniden Grant XL

1. Remove TR24
2. Change R126 (10K) to a 2.2k
3. Change R124 (10K) to a 4.7K
4. Re-Tune L37, L38 for maximum Forward Power on AM.

Uniden PC 66XL

1. Change R76 (2.2K) to a 1K
2. Change R43 (10 Ohm) to a 2.7 Ohm
3. Change R108 (1 Ohm) to a .47 Ohm
4. Re-Tune L13, L10, L9, L8 for maximum Forward Power.

Uniden PC 76XL & Uniden PC 76XLW

1. Change R58 (8.2 Ohm) to a 2.7 Ohm
2. Change R123 (1 Ohm) to a .47 Ohm
3. Re-Tune L14, L13, L12 for maximum Forward Power

Uniden PC-122XL

1. Remove Q27 *(Behind Squelch adjustment on circuit board)*.
2. Change 10K resistor between mike white audio lead and collector of Q27 to a 1K.
3. Change 10K resistor between base of Q26 and disc Capacitor from collector of Q27 to a 1K.
4. Re-Tune for Maximum Forward Power.

VARIABLE ALIGNMENTS SECTION

COBRA RADIOS

148F GTL *(EPT01481IZ Board) (New model w/Frequecy Counter)*

VR1 = AM "S" Meter
VR2 = SSB RX Meter
VR3 = Squelch Range Adjust
VR4 = Carrier Balance Adjust
VR5 = Transmit Freq. Adjust
VR6 = RF Transmit Meter
VR7 = Modulation AMC
VR8 = Final Bias Adjust
VR9 = Driver Bias Adjust
VR10 = AM Power Adjust
VR11 = SSB ALC Adjust

Receive Alignment = L14, L12, L10, L9, L8, L7, L15, L13, L3, L6, L5, L4
Transmit Alignment = L47, L48, L46, L45, L38

19DX LTD

RV1 = Squelch Range Adjust
RV2 = Modulation Adjust
RV3 = Receive "S" Meter
RV4 = RF Transmit Meter

Receive Alignment = L1, L2, L3
Transmit Alignment = L5, L6, L201

93 LTD WX

VR1 = Receive "S" Meter
VR2 = RF Transmit Meter
VR3 = Modulation Adjust
VR4 = Squelch Range Adjust

Receive Alignment = L1, L2, L3, L4
Transmit Alignment = L16, L17, L18

DIRLAND RADIOS

SS-3000B

VR1 = AM/FM "S" Meter
VR4 = Squelch Range Adjust
VR5 = FM Deviation Adjust
VR8 = RF Transmit Meter
VR12 = Low Power Modulation AMC
VR13 = AM Hi Power Adjust
VR14 = Hi Power Modulation AMC
VR16 = AM Low power Adjust

Receive Alignment = L1, L2, L3, L4, L5, L6, L7, L8
Transmit Alignment = L44, L43, L42, L33,

EAGLE RADIOS

Eagle 2000 *(EPT 360014B Board)*

VR1 = AM "S" Meter
VR2 = SSB/CW "S" Meter
VR3 = SSB Squelch Range
VR4 = AM Squelch Range
VR5 = FM Deviation
VR7 = Carrier Balance
VR8 = RF Transmit Meter
VR10 = Final TX Bias Adjust (1)
VR11 = Driver TX Bias Adjust
VR12 = ALC SSB Power
VR13 = AM High Power Adjust
VR14 = AM Modulation AMC Adjust
VR16 = AM Low Power Adjust
VR20 = Final TX Bias (2)
VR21 = Transmit Frequency Adjust

Receive Adjust = L1, L2, L3, L4, L5, L6, L7, L8,L10,L11,L12
Transmit Adjust = L44, L43, L42, L40, L33, L31 (*Spreadable Coil*)

Eagle 5000 *(EPT 295013Z Board)*

VR1 = AM "S" Meter
VR2 = SSB/CW "S" Meter
VR3 = SSB Squelch Range
VR4 = AM Squelch Range
VR7 = Carrier Balance
VR8 = RF Transmit Meter
VR11 = Driver TX Bias Adjust
VR12 = ALC SSB Power
VR13 = AM High Power Adjust
VR14 = AM Modulation AMC Adjust
VR15 = CW Level Adjust
VR16 = AM Low Power Adjust
VR21 = FM Deviation Adjust

Receive Adjust = L9, L11, L12, L13, L14, L3, L4, L5, L6
Transmit Adjust = L46, L47, L48, L43, L34

VARIABLE ALIGNMENTS SECTION

GALAXY RADIOS

DX 99V *(EPT 360014B Board)*

VR1 = AM "S" Meter
VR2 = SSB/CW "S" Meter
VR3 = SSB Squelch Range
VR4 = AM Squelch Range
VR5 = FM Deviation
VR7 = Carrier Balance
VR8 = RF Transmit Meter
VR10 = Final TX Bias Adjust (1)
VR11 = Driver TX Bias Adjust
VR12 = ALC SSB Power
VR13 = AM High Power Adjust
VR14 = AM Modulation AMC Adjust
VR16 = AM Low Power Adjust
VR20 = Final TX Bias (2)
VR21 = Transmit Frequency Adjust

Receive Adjust = L1, L2, L3, L4, L5, L6, L7, L8
Transmit Adjust = L44, L43, L42, L40, L33

MIRAGE 88 *(EPT 360014B Board)*

VR1 = AM "S" Meter
VR2 = SSB/CW "S" Meter
VR3 = SSB Squelch Range
VR4 = AM Squelch Range
VR5 = FM Deviation
VR7 = Carrier Balance
VR8 = RF Transmit Meter
VR10 = Final TX Bias Adjust (1)
VR11 = Driver TX Bias Adjust
VR12 = ALC SSB Power
VR13 = AM High Power Adjust
VR14 = AM Modulation AMC Adjust
VR16 = AM Low Power Adjust
VR20 = Final TX Bias (2)
VR21 = Transmit Frequency Adjust

Receive Adjust = L1, L2, L3, L4, L5, L6, L7, L8
Transmit Adjust = L44, L43, L42, L40, L33

MAXON® RADIOS

MCB-60

RV101 = Squelch Range Adjust
RV102 = Receive Meter Adjust
RV201 = Modulation AMC adjust
RV301 = Transmit Meter Adjust
RV302 = SWR Meter Calibrate

Receive Adjust = L101, L102, L103, L104, L105, L106, L107, L108, L109
Transmit Adjust = L301, L302, L303, L304, L305, L306

MIDLAND RADIOS

77-104XL

VR3 = Squelch Range Adjust
VR4 = Modulation Adjust

Receive Adjust = T-1, T-2, T-3, T-4, T-5
Transmit Adjust = T-8, T-9, T-10, L-3, L-6, L-7

RANGER RADIOS

RCI 2980 *(EPT 360014B Board)*

VR1 = AM "S" Meter
VR2 = SSB/CW "S" Meter
VR3 = SSB Squelch Range
VR4 = AM Squelch Range
VR5 = FM Deviation
VR7 = Carrier Balance
VR8 = RF Transmit Meter
VR10 = Final TX Bias Adjust (1)
VR11 = Driver TX Bias Adjust
VR12 = ALC SSB Power
VR13 = AM High Power Adjust
VR14 = AM Modulation AMC Adjust
VR16 = AM Low Power Adjust
VR20 = Final TX Bias (2)
VR21 = Transmit Frequency Adjust
VR803= Power Range Adjust

Receive Adjust = L1, L2, L3, L4, L5, L6, L7, L8,L10,L11,L12
Transmit Adjust = L44, L43, L42, L40, L33, L31 (*Spreadable Coil*)

RCI 2990 *(EPT 295013Z Board)*

VR1 = AM "S" Meter
VR2 = SSB/CW "S" Meter
VR3 = SSB Squelch Range
VR4 = AM Squelch Range
VR7 = Carrier Balance
VR8 = RF Transmit Meter
VR11 = Driver TX Bias Adjust
VR12 = ALC SSB Power
VR13 = AM High Power Adjust
VR14 = AM Modulation AMC Adjust
VR15 = CW Level Adjust
VR16 = AM Low Power Adjust
VR21 = FM Deviation Adjust

Receive Adjust = L9, L11, L12, L13, L14, L3, L4, L5, L6
Transmit Adjust = L46, L47, L48, L43, L34

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PC76 XLW *(New model w/ Weather Channel Alert)*

VR1 = IF Gain Adjust
VR2 = Squelch Range Adjust
VR3 = RX "S" Meter Adjust
VR4 = Modulation AMC adjust
VR5 = TX Meter Adjust
VR6 = Antenna Warning Adjust

Receive Adjust = L1, L2, L3, L4, L5, L6, L7, L8, L9
Transmit Adjust = L20, L21, L17, L16, L14, L13 *(Spreadable)* L12 *(Spreadable)*

PC122XL

VR1 = RX "S" Meter Adjust
VR2 = Squelch Adjust
VR3 = Transmit Frequency Adjust
VR4 = SSB Carrier Balance
VR5 = Modulation AMC adjust
VR6 = SSB RX "S" Meter Adjust
VR7 = TX Meter Adjust
VR8 = Final Bias Adjust
VR9 = Driver Bias Adjust
VR10 = AM Power Adjust

Receive Adjust = L-3, L-4, L-5, L-6, L-7, L-8, I-10, L11
Transmit Adjust = L-35, L-36, L-37, L-34, L-26, L-25

PRO501XL

VR1 = Squelch Range Adjust

Receive Adjust = L103, L102
Transmit Adjust = L3, L4, L5

SPECIAL INSTRUCTIONS

In the next few pages we have listed some of the more popular radios and their associated mike hookups. In column #1 we have listed the Radio Make & Model. In column #2 we have listed the radios' normal mike pin-out information. The balance of the columns list specific microphones and their wire ***Color Codes*** and how they are to be wired to each of the radios listed in column #1.

Although we have tried to cover the more popular mikes we realize that many more exist. This is why we listed in column #2 the pin-out information on each radio. With this information you should be able to wire any mike to any radio, as long as you know what each wires function is for the microphone.

Some listed microphones may require a special hookup modification in order to function properly. These are covered by footnotes in the radio or the microphone column. Some microphones may also require a resistor in the audio lead in order to eliminate feed back during receive and/or to reduce the DC potential on the audio lead. This is often required for some of the Midland and Kraco 4-Pin Models. Adding a resistor (47k to 270k) in series with the audio lead will usually eliminate any feedback. If you use an external PA speaker on these models you will need to use a 6 wire microphone instead of a 4 wire model.

Mike Type / Model	*Standard Mike Wiring HOOKUP*	ASTATIC 575M-6, 636L, D104M6, M6B 1104C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw.	ASTATIC 575M D104M T-UG8 Stand VALOR PDC66 / Echo *Color Code* Shield-Ground Red-Transmit Black-Receive	SADELTA Brown Plus Echomaster + Echomaster Pro ME-3 MB-4 /R. Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	GALAXY DC-5213 (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	TURNER Expander 300 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw.	GALAXY CB-660ET CB-660ETR *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	DAIWA EM-500 COBRA CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
ALAN 555	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
ALAN 560	1-Shield 2-Audio 3-Transmit 4-Receive 5-Ch Ctrl Up 6-Ch Ctrl Dn	1-Shield & Blue 2-White 3-Red 4-Black 5-N/C 6-N/C Yellow-N/C	1-Shield 2-White 3-Red 4-Black 5-N/C 6-N/C	1-Shield 2-White 3-Brown 4-Green 5-N/C 6-N/C	1-Shield 2-Yellow 3-Red 4-Black 5-N/C 6-N/C	1-Shield & Red 2-White 3-Blue 4-Black 5-N/C 6-N/C Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue 5-N/C 6-N/C	1-Sh & Black 2-Red 3-White 4-Blue 5-N/C 6-N/C
BOMAN CB-515, CB-525 CB-535, CB-710 CB-910 CB-920, CB-930 CB-950,CB-970 CB-990	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
Correction to Volume 5 below for 18 ULTRA & 19ULTRA								
COBRA 18ULTRA 19ULTRA 21, 77X, 78X 18LTD 19 19DX LTD 19LTD, 19GTL 21XLR, 26 21GTL, LTD 21LTD-Classic 25GTL, LTD 25LTD-Classic Gold 25LTD WX Classic 25PLUS 29,29XLR 29LTD, Classic 29LTD-Classic Gold 29LTD WX Classic 29PLUS 31PLUS, 33PLUS 40X 963XLR 87GTL, CAM89 89XLR, 89GTL 93LTD WX 135, 135XLR 138XLR 139XLR 146GTL, 148GTL-DX 148GTL-B 1600GTL	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
COBRA 18RV 18PLUS 19WX,19PLUS 20LTD 20PLUS 23PLUS 41PLUS	1-Audio 4-Shield 2-Transmit 5-Receive 3-N/C	1-White 4-Sh & Blue 2-Red 5-Black 3-N/C Yellow-N/C	1-White 4-Shield 2-Red 5-Black 3-N/C Electronic	1-White 4-Shield 2-Brown 5-Green 3-N/C	1-Yellow 4-Shield 2-Red 5-Black 3-N/C	1-White 4-Shield & Red 2-Blue 5-Black 3-N/C Yellow-N/C	1-White 4-Sh & Black 2-Red 5-Blue 3-N/C	1-Red 4-Sh & Black 2-White 5-Blue 3-N/C

Mike Type / Model	*Standard Mike Wiring HOOKUP*	**ASTATIC** 575M-6, 636L D104M6, M6B 1104C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw.	**ASTATIC** 575M D104M T-UG8 Stand **VALOR** PDC66 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	**SADELTA** Bravo Plus Echomaster + Echomaster Pro MB-3 MB-4 /B. Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	**GALAXY** DC-5215 (4-Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	**TURNER** Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw.	**GALAXY** CB-660E1 CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	**DAIWA** EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
COBRA 90LTD 140GTL 142GTL 148GTL 148FGTL 2000GTL	1-Audio 2-Shield 3-Receive 4-Sw Wire 5-Transmit	1-White 2-Shield 3-Black 4-Blue 5-Red Yellow-N/C	1-White 2-N/C 3-Black 4-Shield 5-Red	1-White 2-N/C 3-Green 4-Shield 5-Brown	1-Yellow 2-N/C 3-Black 4-Shield 5-Red	1-White 2-Shield 3-Black 4-Red 5 -Blue Yellow-N/C	1-White 2-Shield 3-Blue 4-Black 5-Red	1-Red 2-Shield 3-Blue 4-Black 5-White
COLT 210 220 222 510	1-Audio 4-N/C 2-Transmit 5-Receive 3-Shield	1-White 4-N/C 2-Red 5-Black 3-Shield & Blue Yellow-N/C	1-White 4-N/C 2-Red 5-Black 3-Shield Electronic	1-White 4-N/C 2-Brown 5-Green 3-Shield	1-Yellow 4-N/C 2-Red 5-Black 3-Shield	1-White 4-N/C 2-Blue 5-Black 3-Shield & Red Yellow-N/C	1-White 4-N/C 2-Red 5-Blue 3-Sh & Black	1-Red 4-N/C 2-White 5-Blue 3-Sh & Black
COLT 290 390 480 485 800 870 1000 1200 2400	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
COMMTRON CXX XII	1-Audio 4-N/C 2-Transmit 5-Receive 3-Shield	1-White 4-N/C 2-Red 5-Black 3-Shield & Blue Yellow-N/C	1-White 4-N/C 2-Red 5-Black 3-Shield Electronic	1-White 4-N/C 2-Brown 5-Green 3-Shield	1-Yellow 4-N/C 2-Red 5-Black 3-Shield	1-White 4-N/C 2-Blue 5-Black 3-Shield & Red Yellow-N/C	1-White 4-N/C 2-Red 5-Blue 3-Sh & Black	1-Red 4-N/C 2-White 5-Blue 3-Sh & Black
CONNEX 3300	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Sh & Blue 2-White 3-Red 4-Black Yellow-N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
COURIER Galaxy	1-Audio 2-Shield 3-Receive 4- Sw Wire 5-Transmit	1-White 2-Shield 3-Black 4-Blue 5-Red Yellow-N/C	1-White 2-N/C 3-Black 4-Shield 5-Red	1-White 2-N/C 3-Green 4-Shield 5-Brown	1-Yellow 2-N/C 3-Black 4-Shield 5-Red	1-White 2-Shield 3-Black 4-Red 5 -Blue Yellow-N/C	1-White 2-Shield 3-Blue 4-Black 5-Red	1-Red 2-Shield 3-Blue 4-Black 5-White
CRAIG L131	1-N/C 2- Audio 3-Receive 4-Shield 5-Transmit	1-N/C 2- White 3-Black 4-Shield & Blue 5-Red	1-N/C 2- White 3-Black 4-Shield 5-Red	1-N/C 2- White 3-Green 4-Shield 5-Brown	1-N/C 2- Yellow 3-Black 4-Shield 5-Red	1-N/C 2- White 3-Black 4-Shield & Red 5-Blue	1-N/C 2- White 3-Blue 4-Sh & Black 5-Red	1-N/C 2- Red 3-Blue 4-Sh & Black 5-White
CRAIG L-232	1-Audio 2-Shield 3-Receive 4-Switch Wire 5-Transmit	1-White 2-Shield 3-Black 4-Blue 5-Red Yellow-N/C	1-White 2-N/C 3-Black 4-Shield 5-Red	1-White 2-N/C 3-Green 4-Shield 5-Brown	1-Yellow 2-N/C 3-Black 4-Shield 5-Red	1-White 2-Shield 3-Black 4-Red 5-Blue Yellow-N/C	1-White 2-Shield 3-Blue 4-Black 5-Red	1-Red 2-Shield 3-Blue 4-Black 5-White
CRAIG 4101, 4102 4103, 4104 4201 L101 L102 L231 L331	1-N/C 2-Audio 3-Shield 4-Receive 5-Transmit	1-N/C 2-White 3-Shield & Blue 4-Black 5-Red Yellow-N/C	1-N/C 2-White 3-Shield 4-Black 5-Red Electronic	1-N/C 2-White 3-Shield 4-Green 5-Brown	1-N/C 2-White 3-Shield 4-Black 5-Red	1-N/C 2-White 3-Shield & Red 4-Black 5-Blue Yellow-N/C	1-N/C 2-White 3-Sh & Black 4-Blue 5-Red	1-N/C 2-Red 3-Sh & Black 4-Blue 5-White

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Mike Type / Model	*Standard Mike Wiring HOOKUP*	ASTATIC 575M-6, 636L D104M6, M6B 110AC & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw.	ASTATIC 575M D104M T-UG6 Stand VALOR PDC56 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	SADELTA Bravo Plus Echomaster + Echomaster Pro ME-3 MB-4 /R. Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	GALAXY DC-5215 (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	TURNER Expander 505 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw.	GALAXY CB-660E1 CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	DAIWA EM-500 COBRA CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
CRAIG L103 L104	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Sh & Blue 2-White 3-Red 4-Black Yellow-N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
DIRLAND SS-3000B	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
EAGLE EAGLE 2000	1-Shield 2-Audio 3-Transmit 4-Receive	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
EAGLE EAGLE 5000	1-Shield 2-Audio 3-Transmit 4-Receive 5-Ch Ctrl Up 6-Ch Ctrl Dn	1-Shield & Blue 2-White 3-Red 4-Black 5-N/C 6-N/C Yellow-N/C	1-Shield 2-White 3-Red 4-Black 5-N/C 6-N/C	1-Shield 2-White 3-Brown 4-Green 5-N/C 6-N/C	1-Shield 2-Yellow 3-Red 4-Black 5-N/C 6-N/C	1-Shield & Red 2-White 3-Blue 4-Black 5-N/C 6-N/C Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue 5-N/C 6-N/C	1-Sh & Black 2-Red 3-White 4-Blue 5-N/C 6-N/C
EMPEROR TS-5010	1-Audio 2-Shield 3-Transmit 4-Ch Ctrl Up 5-Ch Ctrl Dn	1-White 2-Shield & Blue 3-Red 4-N/C 5-N/C Yellow-N/C Black-N/C	1-White 2-Shield 3-Red 4-N/C 5-N/C Black-N/C	1-White 2-Shield 3-Brown 4-N/C 5-N/C Green-N/C	1-Yellow 2-Shield 3-Red 4-N/C 5-N/C Black-N/C	1-White 2-Sh & Red 3-Blue 4-N/C 5-N/C Yellow-N/C Black-N/C	1-White 2-Sh & Black 3-Red 4-N/C 5-N/C Yellow-N/C Blue-N/C	1-Red 2-Sh & Black 3-White 4-N/C 5-N/C Blue-N/C
FORMAC 400 700	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow -N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
GALAXY 2100 33 PLUS DX 33HML DX 44V DX 55V DX 66V DX 77HML DX 77V DX 88HML DX99V JUPITER MARS MIRAGE MIRAGE 44 MIRAGE88 PLUTO SATURN SATURN II SIRIUS SUPER GALAXY	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue

Mike Type / Model	*Standard Mike Wiring HOOKUP*	**ASTATIC** 575M-6, 636L-D104M6, M6B 1104C & CM T-UD9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw.	**ASTATIC** 575M D104M T-UG8 Stand **VALOR** PDC56 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	**SADELTA** Bravo Plus Echomaster + Echomaster Pro ME-3 MB-4 /B, Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	**GALAXY** DC-5215 (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	**TURNER** Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw.	**GALAXY** CB-660E1 CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	**DAIWA** EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
GALAXY SATURN *TURBO*	1-Shield 2-Audio 3-Transmit 4-Receive 5-Ch Ctrl Up 6-Ch Ctrl Do	1-Shield & Blue 2-White 3-Red 4-Black 5-N/C 6-N/C Yellow-N/C	1-Shield 2-White 3-Red 4-Black 5-N/C 6-N/C	1-Shield 2-White 3-Brown 4-Green 5-N/C 6-N/C	1-Shield 2-Yellow 3-Red 4-Black 5-N/C 6-N/C	1-Shield & Red 2-White 3-Blue 4-Black 5-N/C 6-N/C Yellow-Audio Sw.	1-Sh & Black 2-White 3-Red 4-Blue 5-N/C 6-N/C	1-Sh & Black 2-Red 3-White 4-Blue 5-N/C 6-N/C
G.E. 3-5800, 3-5801A 3-5804B, G 3-5806, 3-5806A 3-5808A 3-5809, 3-5809B 3-5809C 3-5810A, B, 3-5811B 3-5818A 3-5871, 3-5871A ,B	4-Audio 1-Shield 2-N/C 3-Transmit 5-Receive	4-White 1-Shield & Blue 2-N/C 3-Red 5-Black Yellow-N/C	Not Comp. 4-White 1-Shield 2-N/C 3-Red 5-Black Electronic	Not Comp. 4-White 1-Shield 2-N/C 3-Brown 5-Green	Not Comp. 4-Yellow 1-Shield 2-N/C 3-Red 5-Black	4-White 1-Shield & Red 2-N/C 3-Blue 5-Black Yellow-N/C	4-White 1-Sh & Black 2-N/C 3-Red 5-Blue	4-Red 1-Sh & Black 2-N/C 3-White 5-Blue
G.E. 3-5802, 3-5804D 3-5812A 3-5813, A,B 3-5814, A, B 3-5817A, 3-5818 3-5819,A, 3-5825, A 3-5869, A 3-5873, 3-5875A	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	Not Comp. 1-White 2-Shield 3-Black 4-Red *Add a 47k resistor in series with the white lead.	Not Comp. 1-White 2-Shield 3-Green 4-Brown	Not Comp. 1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow -N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
K-40 Production Model #1 Production Model #2 Production Model #3 Production Model #6	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
KRACO 2310, 2320, 2330 2345, 2355 2320A, 2320B KCB-4001, 4005 KCB-4010, 4020 KCB-4030, 4045	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow -N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
LAFAYETTE TELSAT SSB-140	1-Audio 2-Transmit 3-Switch Wire 4-Shield 5-Receive	1-White 2-Red 3-Blue 4-Shield 5-Black Yellow-N/C	1-White 2-Red 3-Shield 4-N/C 5-Black	1-White 2-Brown 3-Shield 4-N/C 5-Green	1-Yellow 2-Red 3-Shield 4-N/C 5-Black	1-White 2-Blue 3-Red 4-Shield 5-Black Yellow-N/C	1-White 2-Red 3-Black 4-Shield 5-Blue	1-Red 2-White 3-Black 4-Shield 5-Blue
MAJOR M-120	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
MAXON MCB-60	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue

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Mike Type / Model	*Standard Mike Wiring HOOKUP*	**ASTATIC** 575M-6, 636L D104M6, M6B 1104C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw	**ASTATIC** 575M D104M T-UG8 Stand **VALOR** PDC66 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	**SADELTA** Bravo Plus Echomaster + Echomaster Pro ME-3 MB-4 /R, Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	**GALAXY** DC-5213 (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	**TURNER** Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw	**GALAXY** CB-660E1 CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	**DAIWA** EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
MIDLAND 151M 77-092 77-094 77-099 77-102, 77-104 77-105, 77-106 77-116 77-118	1-Audio 4-Shield 5-Receive 3-N/C	1-White 4-Sh & Blue 2-Red 5-Black 3-N/C Yellow-N/C	1-White 4-Shield 2-Red 5-Black 3-N/C Electronic	1-White 4-Shield 2-Brown 5-Green 3-N/C	1-Yellow 4-Shield 2-Red 5-Black 3-N/C	1-White 4-Shield & Red 2-Blue 5-Black 3-N/C Yellow-N/C	1-White 4-Sh & Black 2-Red 5-Blue 3-N/C	1-Red 4-Sh & Black 2-White 5-Blue 3-N/C
MIDLAND 77-104XL	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
NATO 2000	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
PAL ELECTRONICS Coyote Roadrunner	1-Audio 2-Transmit 3-Receive 4-Shield Relay or Electronic	1-White 2-Red 3-Blue 4-Shield Yellow-N/C Black-N/C	1-White 2-Red 3-Black 4-Shield	1-White 2-Brown 3-Green 4-Shield	1-Yellow 2-Red 3-Black 4-Shield	1-White 2-Blue 3-Red 4-Shield Yellow-N/C Black-N/C	1-White 2-Red 3-Black 4-Shield Blue-N/C	1-Red 2-White 3-Black 4-Shield Blue-N/C
PALOMAR 2400	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
PARADYNAMICS PDC-19 PDC-25 PDC-29	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
PYRAMID CB-22 CB-24 CB-25 CB-26 CB-28	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
PYRAMID 1300	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Sh & Blue 2-White 3-Red 4-Black Yellow-N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
RANGER RCI-2980	1-Shield 2-Audio 3-Transmit 4-Receive	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue

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Mike Type / Model	*Standard Mike Wiring HOOKUP*	**ASTATIC** 575M-6, 636L, D104M6, M6B 1104C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw	**ASTATIC** 575M D104M T-UG8 Stand **VALOR** PDC66 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	**SADELTA** Bravo Plus Echomaster + Echomaster Pro ME-3 MB-4 /R, Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	**GALAXY** DC-5215 (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	**TURNER** Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw	**GALAXY** CB-660EI CB-660E IR *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	**DAIWA** EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
RANGER RCI-2900 RCI-2950 RCI-2970 RCI-2990	1-Shield 2-Audio 3-Transmit 4-Receive 5-Ch Ctrl Up 6-Ch Ctrl Dn	1-Shield & Blue 2-White 3-Red 4-Black 5-N/C 6-N/C Yellow-N/C	1-Shield 2-White 3-Red 4-Black 5-N/C 6-N/C	1-Shield 2-White 3-Brown 4-Green 5-N/C 6-N/C	1-Shield 2-Yellow 3-Red 4-Black 5-N/C 6-N/C	1-Shield & Red 2-White 3-Blue 4-Black 5-N/C 6-N/C Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue 5-N/C 6-N/C	1-Sh & Black 2-Red 3-White 4-Blue 5-N/C 6-N/C
RANGER ST-1000 / HCA818	4-N/C 1-Audio 2-Shield 3-Receive 3-Transmit	4-N/C 1-White 2-Shield & Blue 5-Black 3-Red Yellow-N/C	4-N/C 1-White 2-Shield 5-Black 3-Red	4-N/C 1-White 2-Shield 5-Green 3-Brown	4-N/C 1-Yellow 2-Shield 3-Black 3-Red	6-N/C 1-White 2-Shield & Red 5-Black 3-Blue Yellow-N/C	6-N/C 1-White 2-Shield & Black 5-Blue 3-Red	4-N/C 1-Red 2-Shield & Black 5-Blue 3-White
RANGER AR-3500	1-5 Radio Ctrl 6- Transmit 7 -Shield 8-Audio	1-5 N/C 6-Red 7-Blue & Shield 8-White Yel & Black-N/C	1-5 N/C 6-Red 7-Shield 8-White Black-N/C	1-5 N/C 6-Brown 7-Shield 8-White Green-N/C	1-5 N/C 6-Red 7-Shield 8-Yellow Black-N/C	1-5 N/C 6-Blue 7-Shield & Red 8-White Yel &Black-N/C	1-5 N/C 6-Red 7-Black & Shield 8-White Yel & Blue-N/C	1-5 N/C 6-White 7-Black & Shield 8-Red Yel & Blue-N/C
REALISTIC TRC-24A, 24B TRC-30, 30A TRC-55, 56, 57 TRC-67 TRC-410 TRC-410 TRC-412 TRC-413 TRC-414 TRC-415 TRC-417 TRC-420 TRC-421, 421A TRC-422A TRC-424 TRC-425 TRC-426 TRC-427 TRC-428 TRC-430 TRC-431, TRC-432 TRC-433, TRC-434 TRC-440, TRC441 TRC-448, TRC-449 TRC-450, TRC-451 TRC-452, TRC-453 TRC-454, TRC-455 TRC-456, TRC-457 TRC-458 TRC-459 TRC-460 TRC461 TRC-462 TRC-466 TRC-467 TRC-468 TRC-469 TRC-470 TRC-473 TRC-477 TRC-479 TRC-480 TRC-482 TRC-490 TRC-492 TRC-500	4-Audio 1-Shield 2-N/C 3-Receive 3 - Transmit	4-White 1-Shield & Blue 2-N/C 5-Black 3-Receive Yellow-N/C	4-White 1-Shield 2-N/C 5-Black 3-Red	4-White 1-Shield 2-N/C 5-Green 3-Brown	4-Yellow 1-Shield 2-N/C 5-Black 3-Red	4-White 1-Shield & Red 2-N/C 5-Black 3-Red Yellow-N/C	4-White 1-Sh & Black 2-N/C 5-Blue 3-Red	4-Red 1-Sh & Black 2-N/C 5-Blue 3-White

Mike Type / Model	*Standard Mike Wiring HOOKUP*	ASTATIC 575A-6, 636L, D104M6, M6B 1104C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw.	ASTATIC 575M D104M T-UG8 Stand **VALOR** PDC56 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	SADELTA Bravo Plus Echomaster + Echomaster Pro MB-3 MS-4/R. Boop *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	GALAXY DC-5215 (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	TURNER Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw.	GALAXY CB-660EI CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	DAIWA EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
ROBYN AM-500D* WV-110 WV-23 WV-23A SX-007 DG-30 DG-130D LB-23 LB-23A LB-120 007-140 * Add a .01 capacitor in series with the white lead.	1-Audio 2-Shield 3- Receive 4-Transmit Electronic	1-White 2-Shield & Blue 3-Black 4-Transmit Yellow-N/C	1-White 2-Shield 3-Black 4-Red Electronic	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
ROBYN SB-510D* SB-520D* * Add a .01 capacitor in series with the white lead.	1-Audio 2-Shield 3-Transmit 4-Ground Electronic or Relay	1-White 2-Shield & Blue 3-Red 4-Black Yellow-N/C	1-White 2-Shield 3-Red 4-Black	1-White 2-Shield 3-Brown 4-Green	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Blue 4-Black Yellow-N/C	1-White 2-Shield & Black 3-Red 4-Blue	1-Red 2-Shield & Black 3-White 4-Blue
SAGA 2530	1-Audio 2-Shield 3-Transmit 4-Receive	1-White 2-Shield & Blue 3-Red 4-Black Yellow-N/C	1-White 2-Shield 3-Red 4-Black	1-White 2-Shield 3-Brown 4-Green	1-Yellow 2-Shield 3-Red 4-Black	1-White 2-Shield & Red 3-Blue 4-Black Yellow-N/C	1-White 2-Sh & Black 3-Red 4-Blue	1-Red 2-Sh & Black 3-White 4-Blue
SCOTT DAK IX DAK X	1-Audio 2-Shield 3-Relay 4-Transmit	1-White 2-Shield 3-Blue 4-Red Black-N/C Yellow-N/C	1-White 2-Shield 3-Black 4-Red RELAY	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Red 4-Blue Black-N/C Yellow-N/C	1-White 2-Shield 3-Black 4-Red Black-N/C	1-Red 2-Shield 3-Black 4-White Blue-N/C
SCOTT Dak Mark II Dak Mark III Dak Mark V	1-Audio 4-Shield 2-Transmit 5-Receive 3-Transmit Sw.	1-White 4-Shield 2-Red 5-Black 3-Blue Yellow-N/C	1-White 4-N/C 2-Red 5-Black 3-Shield	1-White 4-N/C 2-Brown 5-Green 3-Shield	1-Yellow 4-N/C 2-Red 5-Black 3-Shield	1-White 4-Shield 2-Blue 5-Black 3-Red Yellow-N/C	1-White 4-Shield 2-Red 5-Blue 3-Black	1-Red 4-Shield 2-White 5-Blue 3-Black
SEARS 370.38050700 562.38200700 663.38000900 663.38020800 663.38070700 934.36710500 934.36712600 934.36740500 934.36741600 934.36742600 934.36760600 943.36770500 934.36771500 934.36772600 934.38060700 934.38062700 934.38080700 934.38081700 934.38110700 934.38120700 934.38260700 934.38270700 Roadtalker(3822)	4-Audio 1-Shield 2-N/C 5-Receive 3-Transmit	4-White 1-Shield & Blue 2-N/C 5-Black 3-Red Yellow-N/C	4-White 1-Shield 2-N/C 5-Black 3-Red	4-White 1-Shield 2-N/C 5-Green 3-Brown	4-Yelow 1-Shield 2-N/C 5-Black 4-Red	4-White 1-Shield & Red 2-N/C 5-Black 3-Blue Yellow-N/C	4-White 1-Sh & Black 2-N/C 5-Blue 3-Red	4-Red 1-Sh & Black 2-N/C 5-Blue 3-White

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SOMMERKAMP TS-2000X	1-Shield 2-Audio 3-Transmit 4-Receive 5-Ch. Up 6-Ch. Down	1-Sh & Blue 2-White 3-Red 4-Black 5-N/C 6-N/C Yellow-N/C	1-Shield 2-White 3-Red 4-Black 5-N/C 6-N/C	1-Shield 2-White 3-Brown 4-Green 5-N/C 6-N/C	1-Shield 2-Yellow 3-Red 4-Black 5-N/C 6-N/C	1-Shield & Red 2-White 3-Blue 4-Black 5-N/C 6-N/C Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue 5-N/C 6-N/C	1-Sh & Black 2-Red 3-White 4-Blue 5-N/C 6-N/C
STANDARD Horizon 29 Horizon 29A	1-Shield 2-Audio 3-Transmit 4-Receive	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
SUPERSTAR "GR " " IA " LBJ 505F 506F TEK-505D TEK-506D 120 121 3900	1-Shield 2-Audio 3-Transmit 4-Receive	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
SUPERSTAR 360FM	1-Audio 2-Shield 3-Receive 4-Sw. Wire 5-Transmit	1-White 2-Shield 3-Black 4-Blue 5-Red Yellow-N/C	1-White 2-N/C 3-Black 4-Shield 5-Red	1-White 2-N/C 3-Green 4-Shield 5-Brown	1-Yellow 2-N/C 3-Black 4-Shield 5-Red	1-White 2-Shield 3-Black 4-Red 5 -Blue Yellow-N/C	1-White 2-Shield 3-Blue 4-Black 5-Red	1-Red 2-Shield 3-Blue 4-Black 5-White
SUPERSTAR 95 2000	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
TEABERRY Stalker 9FM Stalker 9FDX	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Sh & Blue 2-White 3-Red 4-Black Yellow-N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
TEABERRY STALKER III	1-Audio 4-Shield 2-N/C 3-Transmit 5-Receive	1-White 4-Sh & Blue 2-N/C 3-Red 5-Black Yellow-N/C	1-White 4-Shield 2-N/C 3-Red 5-Black Electronic	1-White 4-Shield 2-N/C 3-Brown 5-Green	1-Yellow 4-Shield 2-N/C 3-Red 5-Black	1-White 4-Shield & Red 2-N/C 3-Blue 5-Black Yellow-N/C	1-White 4-Sh & Black 2-N/C 3-Red 5-Blue	1-Red 4-Sh & Black 2-N/C 3-White 5-Blue
TEABERRY STALKER IV STALKER V STALKER VIII	1- Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White

Mike Type / Model	Standard Mike Wiring HOOKUP	ASTATIC 575M-6, 636L D104M6, M6B 114C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw	ASTATIC 575M D104M T-UG8 Stand **VALOR** PDC66 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	SADELTA Bravo Plus Echomaster + Echomaster Pro ME-3 MB-4/R, Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	GALAXY DC-521S (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	TURNER Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw	GALAXY CB-660E1 CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	DAIWA EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
TEABERRY STALKER IX STALKER XV STALKER XX	1-Audio 2-Shield 3-Receive 4-Sw. Wire 5-Transmit	1-White 2-Shield 3-Black 4-Blue 5-Red Yellow-N/C	1-White 2-N/C 3-Black 4-Shield 5-Red	1-White 2-N/C 3-Green 4-Shield 5-Brown	1-Yellow 2-N/C 3-Black 4-Shield 5-Red	1-White 2-Shield 3-Black 4-Red 5 -Blue Yellow-N/C	1-White 2-Shield 3-Blue 4-Black 5-Red	1-Red 2-Shield 3-Blue 4-Black 5-White
TEABERRY Golden 5x5 TB-73 "T" BEAR Titan "T" T DISPATCH T COMMAND	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
TEABERRY RANGER T	1-Shield 2-Receive 3-Transmit 4-Audio	1-Shield & Blue 2-Black 3-Red 4-White Yellow-N/C	1-Shield 2-Black 3-Red 4-White Electronic	1-Shield 2-Green 3-Brown 4-White	1-Shield 2-Black 3-Red 4-White	1-Shield & Red 2-Black 3-Blue 4-White Yellow-N/C	1-Sh & Black 2-Blue 3-Red 4-White	1-Sh & Black 2-Blue 3-White 4-Red
TEK HR-3950	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Sh & Blue 2-White 3-Red 4-Black Yellow-N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
TRAM D201 D201A TITAN TITAN II TITAN IIA TITAN III TITAN IV	1-Audio 2-Shield 3-Receive 4-Transmit	1-White, 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
TRAM D12 D42 D62 Diamond 40 Diamond 60 XL XL-5 XL-23	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Sh & Blue 2-White 3-Red 4-Black Yellow-N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue
TRI MAX 220	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
TRISTAR 120 240 340 727	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White

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Mike Type / Model	*Standard Mike Wiring HOOKUP*	ASTATIC 575M-6, 636L, D104M6, M6B 1104C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw	ASTATIC 575M D104M T-UG8 Stand **VALOR** PDC66 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	SADELTA Bravo Plus Echomaster + Echomaster Pro ME-3 MB-4 /R. Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	GALAXY DC-521S (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	TURNER Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw	GALAXY CB-660E1 CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	DAIWA EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
TRS-Challenger 460 600 730 850 1000 1200 1400	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
UNIDEN/ PRESIDENT AR7 AX7	1-Audio 4-N/C 2-Transmit 5-Receive 3-Shield	1-White 4-N/C 2-Red 5-Black 3-Shield & Blue Yellow-N/C	1-White 4-N/C 2-Red 5-Black 3-Shield Electronic	1-White 4-N/C 2-Brown 5-Green 3-Shield	1-Yellow 4-N/C 2-Red 5-Black 3-Shield	1-White 4-N/C 2-Blue 5-Black 3-Shield & Red Yellow-N/C	1-White 4-N/C 2-Red 5-Blue 3-Sh & Black	1-Red 4-N/C 2-White 5-Blue 3-Sh & Black
UNIDEN/ PRESIDENT PC-33X PC-55X PRO-510e PRO-520e P200 P210	1-Audio 4-Shield 2-Transmit 5-Receive 3-N/C	1-White 4-Sh & Blue 2-Red 5-Black 3-N/C Yellow-N/C	1-White 4-Shield 2-Red 5-Black 1-N/C Electronic	1-White 4-Shield 2-Brown 5-Green 3-N/C	1-Yellow 4-Shield 2-Red 5-Black 3-N/C	1-White 4-Shield & Red 2-Blue 5-Black 3-N/C Yellow-N/C	1-White 4-Sh & Black 2-Red 5-Blue 3-N/C	1-Red 4-Sh & Black 2-White 5-Blue 3-N/C
UNIDEN ADAMS ANDREW J CONVOY II DWIGHT D GRANT (858) GRANT-DX HONEST ABE JACKSON JOHN Q MADISON (858) OLD HICKORY TEDDY R. THOMAS J VEEP Washington (858) ZACHARY T AR4, AX4 AR14,AX14 AX43 AR44,AX44 AR144, AX144 AR711, AX711 P220 P300 PC33 PC55 PC66A, PC66XL PC76XL PC76XLW PC77 PC122, PC122XL PC244 PRO-500D PRO-510 XL PRO-520 XL PRO-530E PRO-535e PRO-538e PRO-540e PRO 640e PRO-710e PRO-810e PTC-104	1-Shield 2-Audio 3-Transmit 4-Receive Electronic	1-Shield & Blue 2-White 3-Red 4-Black Yellow -N/C	1-Shield 2-White 3-Red 4-Black Electronic	1-Shield 2-White 3-Brown 4-Green	1-Shield 2-Yellow 3-Red 4-Black	1-Shield & Red 2-White 3-Blue 4-Black Yellow-N/C	1-Sh & Black 2-White 3-Red 4-Blue	1-Sh & Black 2-Red 3-White 4-Blue

Mike Type / Model	*Standard Mike Wiring HOOKUP*	ASTATIC 575M-6, 634L D104M6, M6B 1104C & CM T-UG9, T-UP9 Diamond Eagle Golden Eagle Night Eagle, K Silver Eagle, K Road Devil *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive Blue-Common Yellow-Audio Sw	ASTATIC 575M D104M T-UG6 Stand **VALOR** PDC66 / Echo *Color Code* White-Audio Shield-Ground Red-Transmit Black-Receive	SADELTA Bravo Plus Echomaster + Echomaster Pro ME-1 MB-4 /R. Beep *Color Code* White-Audio Shield-Ground Brown-Transmit Green-Receive	GALAXY DC-5215 (4 Wire) *Color Code* Yellow-Audio Shield-Ground Red-Transmit Black-Receive	TURNER Expander 500 Road King 56 RK 76 *Color Code* White-Audio Shield-Ground Blue-Transmit Black-Receive Red-Common Yellow-Audio Sw	GALAXY CB-660E1 CB-660E1R *Color Code* White-Audio Shield-Ground Red-Transmit Blue-Receive Black-Common	DAIWA EM-500 **COBRA** CA-70 CA-71 CA-72 CA-79 CA-80 *Color Code* Red-Audio Shield-Ground White-Transmit Blue-Receive Black-Common
UNIDEN GRANT GRANT XL MADISON (8719) McKinley P400 Washington (8719)	1-Audio 2-Shield 3-Receive 4-Sw.Wire 5-Transmit	1-White 2-Shield 3-Black 4-Blue 5-Red Yellow-N/C	1-White 2-N/C 3-Black 4-Shield 5-Red	1-White 2-N/C 3-Green 4-Shield 5-Brown	1-Yellow 2-N/C 3-Black 4-Shield 5-Red	1-White 2-Shield 3-Black 4-Red 5 -Blue Yellow-N/C	1-White 2-Shield 3-Blue 4-Black 5-Red	1-Red 2-Shield 3-Blue 4-Black 5-White
UNIDEN HR-2510 HR-2600 LINCOLN	1-Audio 2-Shield 3-Transmit 4-Ch 5-Ch	1-White 2-Shield & Blue 3-Red 4-N/C 5N/C Black N/C Yellow N/C	1-White 2-Shield 3-Red 4-N/C 5-N/C Black-N/C Electronic	1-White 2-Shield 3-Brown 4-N/C 5-N/C Green-N/C	1-Yellow 2-Shield 3-Red 4-N/C 5-N/C Black-N/C	1-White 2-Shield & Red 3-Blue 4-N/C 5-N/C Black-N/C Yellow-N/C	1-White 2-Sh & Black 3-Red 4-N/C 5-N/C Blue-N/C	1-Red 2-Sh & Black 3-White 4-N/C 5-N/C Blue-N/C
UTAC Studio 4000	1-Audio 2-Transmit 3-Shield Electronic or Relay	1-White 2-Red 3-Shield & Blue Yellow-N/C Black-N/C	1-White 2-Red 3-Sh & Black Electronic or Relay	1-White 2-Brown 3-Sh. & Green	1-Yellow 2-Red 3-Sh. & Black	1-White 2-Blue 3-Shield & Red Yellow- N/C Black-N/C	1-White 2-Red 3-Sh & Black Blue-N/C	1-Red 2-White 3-Sh & Black Blue-N/C
YOSAN IC-2204	1-Audio 2-Shield 3-Receive 4-Transmit	1-White 2-Shield & Blue 3-Black 4-Red Yellow-N/C	1-White 2-Shield 3-Black 4-Red	1-White 2-Shield 3-Green 4-Brown	1-Yellow 2-Shield 3-Black 4-Red	1-White 2-Shield & Red 3-Black 4-Blue Yellow-N/C	1-White 2-Sh & Black 3-Blue 4-Red	1-Red 2-Sh & Black 3-Blue 4-White
WELL W-605 W-705	1-Audio 2-Shield 3-Transmit 4-Receive	1-White 2-Shield & Blue 3-Red 4-Black Yellow-N/C	1-White 2-Shield 3-Red 4-Black	1-White 2-Shield 3-Brown 4-Green	1-Yellow 2-Shield 3-Red 4-Black	1-White 2-Shield & Red 3-Blue 4-Black Yellow-N/C	1-White 2-Sh & Black 3-Red 4-Blue	1-Red 2-Sh & Black 3-White 4-Blue
ZODIAC M-5023	1-Audio 2-Shield 3-Transmit 4-N/C 5-Receive Electronic	1-White 2-Shield & Blue 3-Red 4-N/C 5-Black Yellow-N/C	1-White 2-Shield 3-Red 4-N/C 5-Black Electronic	1-White 2-Shield 3-Brown 4-N/C 5-Green	1-Yellow 2-Shield 3-Red 4-N/C 5-Black	1-White 2-Shield & Red 3-Blue 4-N/C 5-Black Yellow-N/C	1-White 2-Sh & Black 3-Red 4-N/C 5-Blue	1-Red 2-Sh & Black 3-White 4-N/C 5-Blue
ZODIAC M-5026	1-Audio 2-Ground 3-Transmit 4-Shield 5-N/C RELAY	1-White 2-Blue 3-Red 4-Shield 5-N/C Black-N/C Yellow-N/C	1-White 2-Black 3-Red 4-Shield 5-N/C RELAY	1-White 2-Green 3-Brown 4-Shield 5-N/C	1-Yellow 2-Black 3-Red 4-Shield 5-N/C	1-White 2-Red 3-Blue 4-Shield 5-N/C Black-N/C Yellow-N/C	1-White 2-Black 3-Red 4-Shield 5-N/C Blue-N/C	1-Red 2-Black 3-White 4-Shield 5-N/C Blue-N/C

GALAXY SATURN SERVICE/OWNERS MANUAL

COMPLETE with
Schematics
Operating Instructions
Complete Voltage Information
Transistor & IC Pin-Outs
Repair & Conversion Tips
Channel Charts for 5 & 6 Band Versions

Available from your Local Dealer or Distributor

Although this manual is written to cover the Galaxy Saturn, it can also be used on many other Export Radios with the same circuit board. Such as the SUPER GALAXY, MIRAGE 88, GALAXY II, GALAXY 77HML, 77V, GALAXY 88HML, 88V, and many others.

Master Index *(For Volume 1 Thru Volume 7)*

Using the Master Index

COBRA RADIOS ← Radio Make & Model or Models
19 PLUS ← Subject
Repair Tip.....2 / 31 ← Volume / Page
Power Modification.....2 / 07
Variable Adjustments.....3 / 34

Note : This INDEX covers the latest *revised edition* of CB TUNE-UP MANUAL MASTER EDITION Volume 1. The *new revised edition* has the same information as the old Volume 1 but with a new improved format for ease of use. Although the information is the same, unfortunately it will not be on the same page as the old Volume 1. Please keep this in mind when using this index for subject matter contained in the old version of Volume 1. *Thank You!*

SUBJECT INDEX

CHANNEL CONVERSIONS
858 PLL Chip..... 2 / 15-23
5719 PLL Chip..... 2 / 24-29
PLL-02A Chip..... 2 / 10-14
Component Identification..... 5 / 48
Correction for Volume II (Page 25)..... 2 / 25
Corrections..... 5 / 06
Correction for 858 Clarifier Mod..... 3 / 21
ECHO BOARD Installation
EPTOSSBS0B (Connex)..... 7 / 37
Improving Radio Performance..... 3 / 06
MICROPHONE WIRING CHARTS
Volume II..... 2 / 34-43
Volume III..... 3 / 39-45
Volume 4..... 4 / 52-58
Volume 5..... 5 / 49-51
Volume 6..... 6 / 40-50
REPAIR TIP
ALL RADIOS
Over Modulation..... 1 / 61
SCANNER REPAIR TIPS
BC-140XL , BC-142XL, BC-145XL
No Audio,Unit still Scans & Prog..... 2 / 46
No scan,no audio or squelch..... 3 / 47
BC-147XL
No Audio,Unit still Scans & Prog..... 2 / 46
BC-210XL
No Digit Display or very Dim..... 2 / 44
BC-210XW
No Digit Display or very Dim..... 2 / 45
BC-800XLT
No Digit Display or very Dim..... 3 / 47
Voltage Pin-Out Information..... 3 / 48-50
BC-855XLT
Cellular Restoration Mod..... 2 / 47
BEARCAT 20/20
No Digit Display or very Dim..... 2 / 45
STANDARD 40 CH. Freq. Chart..... 6 / 06
SUPER-TALK INSTALLATION
General Installation Instructions..... 3 / 27
ANDREW "J"..... 2 / 06
AR44 , AX44..... 2 / 06
AR-711, AX-711..... 2 / 06
COBRA 21GTL,25GTL,25LTD..... 2 / 06
COBRA 29LTD or LTD Classic..... 2 / 04,05
COBRA 142GTL Installation..... 3 / 26
(Same as Washington)
COBRA 2000GTL..... 4 / 10
CONNEX 3300..... 4 / 18
HONEST ABE Installation..... 3 / 28
P220..... 2 / 06
REALISTIC TRC-432..... 5 / 27
REALISTIC TRC-490..... 5 / 28
SUPERSTAR 3900..... 4 / 22
T BEAR Installation..... 3 / 28
UNIDEN PC66, PC66A..... 2 / 06
UNIDEN WASHINGTON Install..... 3 / 26
TALK BACK
Conversion Mod. for Export Radios 3 / 30

CB RADIO INDEX

ACTIONLINE RADIOS
WCB-10
Tune-Up..... 1 / 04

ALAN RADIOS
ALAN 555
ALAN560
Tune-Up..... 6 / 04

ALARON RADIOS
B-1025 B-4085
B-1100 B-4900
B-1150 B-5050A
B-4075 B-5200
Tune-Up..... 1 / 04

AMERICAN ELECTRONICS RADIOS
76-501 76-601
76-551
Tune-Up..... 1 / 04

ARGO RADIOS
ARGO 300
Tune-Up..... 1 / 04

ARGUS RADIOS
5000
Tune-Up..... 1 / 05

AUDIOVOX RADIOS
100
Tune-Up..... 1 / 05
CB-26
Tune-Up..... 2 / 02
MCB-500 MCB-3000
MCB-750 MCB-5000
MCB-1000 MDU-6000
MCB-2000 WINDSOR
Tune-Up..... 1 / 05

AUTOMATIC RADIOS
CBH-2255
Tune-Up..... 1 / 05

BELTEK RADIOS
ENDURO 5 & ENDURO 23
Tune-Up..... 1 / 05

BETA RADIOS
BETA 23 DELUXE
Tune-Up..... 1 / 05

BOMAN RADIOS
CB-515 CB-750
CB-555 CB-770
CB-7208 CB-775
CB-725
Tune-Up..... 1 / 07
CB-910
Channel Conversion..... 2 / 11-14
Tune-Up..... 1 / 05
CB-920
Channel Conversion..... 2 / 11-14
Tune-Up..... 1 / 05
CB-930
Channel Conversion..... 2 / 11-14
Tune-Up..... 1 / 05
CB-950
Tune-Up..... 1 / 05
CBH-900 CBR-9900
CBH-990 CBR-9940
CBM-6100 CBR-9950
CBR-9600
Tune-Up..... 1 / 06

BRISTOL RADIOS
CB-2271
Tune-Up..... 1 / 06

BROWNING RADIOS
BARON
BROWNIE 23
Tune-Up..... 1 / 06
BROWNIE 40
Channel Conversion..... 2 / 15-17
Tune-Up..... 1 / 06
LTD
MARK 4A
SABRE
SST(Early Production)
SST(Late Production)
SST 2
Tune-Up..... 1 / 06

CALTRON RADIOS
CB-7500
Tune-Up..... 1 / 06

CHANNEL MASTER RADIOS
CB-6830 CB-6834
CB-6832 CB-6835
Tune-Up..... 1 / 06

CLARICON RADIOS
71200
ACTIVATOR (308000
Tune-Up..... 1 / 06
INTRUDER (30200)
PIRATE (30400)
Tune-Up..... 1 / 07
PRIVATEER(30600)
RAIDER
Tune-Up..... 1 / 06

CLARION RADIOS
DMA-066 PE-672E
JC-201E (CB UNIT) RCJ-003
JC-202E TC-203C
JC-203E
Tune-Up..... 1 / 07

COBRA RADIOS
7 PLUS
Tune-Up..... 1 / 07
10 PLUS
Tune-Up..... 1 / 07
18 LTD
Tune-Up..... 1 / 07
18 PLUS
Tune-Up..... 1 / 07
19 RV
Power Modification..... 1 / 50
Tune-Up..... 1 / 07
19 ULTRA
Tune-Up..... 6 / 04
Variable Alignments..... 6 / 31
19
Tune-Up..... 1 / 07
19DX LTD (Limited Edition)
Tune-Up..... 7 / 04
Variable Adjustments..... 7 / 39
19 GTL
Power Modification..... 1 / 50
Tune-Up..... 1 / 07
Variable Adjustments..... 4 / 45

19 LTD
Tune-Up..... 1 / 07
19 LTD Classic
Tune-Up..... 1 / 07
19M
Tune-Up..... 1 / 07
19 PLUS (Metal Case Model)
Tune-Up..... 1 / 07
19 PLUS (Plastic Case Model)
Power Modification..... 2 / 07
Repair Tip..... 2 / 31
Tune-Up..... 1 / 07
Variable Adjustments..... 3 / 34
19XS
Tune-Up..... 1 / 07
20 (B&K)
Tune-Up..... 1 / 07
20 LTD
Tune-Up..... 1 / 07
20 PLUS
Tune-Up..... 1 / 07
20 PLUS (Plastic Case Model)
Tune-Up..... 1 / 07
21
Tune-Up..... 1 / 07
21A (Old Version)
Tune-Up..... 1 / 07
21GTL
Power Modification..... 1 / 49
Tune-Up..... 1 / 07
Super-Talk Installation..... 2 / 06
21LTD
Power Modification..... 1 / 49
Tune-Up..... 1 / 07
21 LTD Classic
Tune-Up..... 1 / 07
21 LTD Classic *(New Model made in China)*
Tune-Up..... 6 / 04
Variable Adjustments..... 6 / 31
21 PLUS
Tune-Up..... 1 / 07
21X
Tune-Up..... 1 / 07
21XLR
Power Modification..... 1 / 50
Tune-Up..... 1 / 08
23 PLUS
Power Modification..... 1 / 50
Tune-Up..... 1 / 08
25GTL
Power Modification..... 1 / 49
Tune-Up..... 1 / 08
Super-Talk Installation..... 2 / 06
25LTD, Classic, Classic Gold
Power Modification..... 2 / 07
Super-Talk Installation..... 2 / 06
Tune-Up..... 1 / 08
Tune-Up..... 2 / 02
Variable Adjustments..... 3 / 34
25LTD WX Classic
Power Modification..... 7 / 38
Tune-Up..... 6 / 04
Variable Adjustments..... 6 / 31
25 PLUS
Tune-Up..... 1 / 08
Variable Adjustments..... 4 / 45
26
Tune-Up..... 1 / 08

Master Index *(For Volume 1 Thru Volume 7)*

28A
Tune-Up..... 1 / 08
29A (Old Model)
Tune-Up..... 1 / 08
29GTL
Power Modification..... 1 / 50
Tune-Up..... 1 / 08
29LTD CLassic, Classic Gold
Power Modification..... 1 / 50
Super-Talk Installation Diagram..... 2 / 04,05
Tune-Up..... 1 / 08
Variable Adjustments..... 3 / 34
29LTD WX Classic
Power Modification..... 7 / 38
Tune-Up..... 6 / 04
Variable Adjustments..... 6 / 31
29 PLUS
Tune-Up..... 1 / 08
29XLR
Channel Conversion..... 2 / 15-17
Power Modification..... 1 / 50
Tune-Up..... 1 / 08
31 PLUS
Tune-Up (Correction Old Vol.I)..... 3 / 05
Variable Adjustments..... 3 / 34
32XLR
Channel Conversion..... 3 / 20
Tune-Up..... 1 / 08
33 PLUS
Tune-Up..... 1 / 08
Variable Adjustments..... 3 / 34
39 LTD (S.O.S.)
40 PLUS
Tune-Up..... 1 / 08
40X
Tune-Up..... 1 / 08
Variable Adjustments..... 4 / 45
41 PLUS
45 XLR
46 XLR
47 XLR
50 XLR
55 XLR
62 XLR
63 GTL
Tune-Up..... 1 / 08
66 GTL
Tune-Up..... 1 / 08
77X
Power Modification..... 1 / 49
Tune-Up..... 1 / 08
78X
Power Modification..... 1 / 49
Tune-Up..... 1 / 08
Variable Adjustments..... 3 / 34
85
Tune-Up..... 1 / 08
86XLR
Channel Conversion..... 3 / 20
Tune-Up..... 1 / 08
Variable Adjustments..... 3 / 34
87GTL
Power Modification..... 1 / 50
Tune-Up..... 1 / 08
CAM 89
Tune-Up..... 1 / 08
89GTL
Power Modification..... 1 / 50
Tune-Up..... 1 / 08
89XLR
Channel Conversion..... 2 / 15-17
Power Modification..... 1 / 50
Tune-Up..... 1 / 09
90LTD
Power Modification..... 1 / 50
Tune-Up..... 1 / 09
93 LTD-WX
Tune-Up..... 7 / 04
Variable Adjustments..... 7 / 39
132 (Old Version)
132A
132 XLR
134
135 (Old Version)
135 XLR
138A
Tune-Up..... 1 / 09
138XLR
Channel Conversion #1..... 2 / 18,19
Channel Conversion #2 (Rotary)..... 2 / 22
Channel Conversion #3..... 2 / 23
Clarifier Conversion..... 2 / 20
Power Mod.(Cobra 139XLR)..... 1 / 51
Repair Tip (Regulator Failure)..... 1 / 60
Tune-Up..... 1 / 09
Widebanding Procedure..... 2 / 20
139
Tune-Up..... 1 / 09
139XLR
Channel Conversion#1..... 2 / 18,19
Channel Conversion #2 (Rotary)..... 2 / 22
Channel Conversion #3..... 2 / 23
Clarifier Conversion..... 2 / 20
Power Modification..... 1 / 51
Repair Tip (Regulator Failure)..... 1 / 60
Tune-Up..... 1 / 09
Widebanding Procedure..... 2 / 20
140GTL
Channel Conversion..... 2 / 27
Clarifier Conversion..... 2 / 27
Power Modification..... 1 / 51
Repair Tip (Regulator Failure)..... 1 / 60
Tune-Up..... 1 / 09
Variable Adjustments..... 1 / 62
142GTL
Channel Conv. w/Xtal Change..... 2 / 27
Channel Conv. w/o Xtal Change... 2 / 27
Clarifier Conversion #1..... 2 / 27
Clarifier Conversion w/10 Turn Pot. 3 / 14
Power Modification..... 1 / 51
Repair Tip (Regulator Failure)..... 1 / 60
Tune-Up..... 1 / 09
Variable Adjustments..... 1 / 62
146GTL
Tune-Up..... 1 / 09
Clarifier Modification..... 4 / 30
148GTL
Channel Conversion(Switch)..... 2 / 24
Clarifier Conversion..... 2 / 25
Clarifier Conversion(Update)..... 2 / 25
Power Modification..... 1 / 51
Repair Tip (Regulator Failure)..... 1 / 60
Tune-Up..... 1 / 09
148GTL (New Model made in Malaysia)
Clarifier Slide Modification..... 6 / 18
Rotary Switch Ch. Conversion..... 6 / 22
Rotary Switch Ch. Chart..... 6 / 23
Super Slide Clarifier Modification.. 6 / 19
Switch Channel Conversion..... 6 / 20
Switch Channel Chart..... 6 / 62
Tune-Up..... 6 / 04
Variable Adjustments..... 6 / 31
148F-GTL (Has Freq. Counter)
Clarifier Slide Modification..... 7 / 29
Rotary Switch Ch. Conversion..... 7 / 33
Rotary Switch Ch. Chart..... 7 / 32
Super Slide Clarifier Modification.. 7 / 30
Switch Channel Conversion..... 7 / 31
Switch Channel Chart..... 7 / 32
Tune-Up..... 7 / 04
Variable Adjustments..... 7 / 39
148GTL-8
Tune-Up..... 1 / 09
148GTL (Fake Version)
Tune-Up..... 1 / 09
Variable Adjustments..... 1 / 65
148GTL-DX (Early Production)
Tune-Up..... 1 / 09
Variable Adjustments..... 1 / 62
148GTL-DX (Late Production Model)
Power Modification..... 1 / 51
Tune-Up..... 1 / 09
Variable Adjustments..... 1 / 64
148GTL-DX (Copy Version)
Tune-Up..... 1 / 09
GTL 150
Tune-Up..... 1 / 09
1000GTL
Power Modification..... 1 / 50
Tune-Up..... 1 / 09
2000GTL
Tune-Up..... 1 / 09
Channel Conv. #1(Toggle Sw.)..... 2 / 24
Channel Conv. #2(Rotary Sw.)..... 3 / 16
Channel Conv. 11.1125 Xtal Rot.. 4 / 08
Clarifier Conversion #1..... 2 / 25
Clarifier Conversion #1..... 3 / 25
Clarifier Super Slide w/10 Pot..... 4 / 06
Mike Wiring..... 2 / 35
Power Modification..... 1 / 51
Repair Tips(Freq Counter)..... 1 / 59
Repair Tip (Regulator Failure)..... 1 / 60
Repair Tips..... 2 / 31
Repair Tip (No Modulation)..... 5 / 43
Super Slide Modification..... 4 / 06
Super-Talk Installation..... 4 / 10
Variable Adjustments..... 1 / 62
HH-70
Tune-Up..... 6 / 04
Variable Adjustments..... 6 / 31

COLT RADIOS
EXCALIBUR (EPT360010Z Board)
Tune-Up..... 1 / 10
Variable Adjustments..... 1 / 64
EXCALIBUR (PTM8121D1X4 Board)
Tune-Up..... 1 / 10
Variable Adjustments..... 1 / 64
8X33
Channel Conversion..... 2 / 11-14
Tune-Up..... 1 / 09
320DX
Tune-Up..... 1 / 09
Variable Adjustments..... 1 / 64
320FM
Tune-Up..... 1 / 09
Variable Adjustments..... 1 / 64
350
Tune-Up..... 1 / 09
Tune-Up (Correction for Old Volt.)..3 / 05
355
Tune-Up..... 1 / 09
357 (New Chassis Model)
Tune-Up..... 1 / 09
Variable Adjustments..... 4 / 45
357 (Old Chassis Model)
Tune-Up..... 1 / 10
359
Tune-Up..... 2 / 02
Variable Adjustments..... 2 / 33
390
Channel Conversion..... 2 / 11-14
Tune-Up..... 1 / 10
444
Tune-Up..... 1 / 10
Variable Adjustments..... 1 / 62
480
Tune-Up..... 1 / 10
Clarifier Modification..... 5 / 25
Variable Adjustments..... 5 / 45
485
485DX
510
800
870
870 (Export)
Tune-Up..... 1 / 10
1000
Clarifier Modification..... 5 / 25
Tune-Up..... 1 / 10
Variable Adjustments..... 5 / 45
1200
Tune-Up..... 1 / 10
1200DX
Tune-Up..... 1 / 10
Variable Adjustments..... 1 / 64
1600DX
Tune-Up..... 1 / 10
Variable Adjustments..... 1 / 65
2000DX
Tune-Up..... 1 / 10
Variable Adjustments..... 1 / 65
2400
Tune-Up..... 1 / 10
Variable Adjustments..... 1 / 65

COMMANDO RADIOS
2310 2325
2320 2340
Tune-Up..... 1 / 10

COMMTRON RADIOS
CXX
Microphone Wiring..... 2 / 36
Tune-Up..... 2 / 03
Variable Adjustments..... 2 / 33
VII
XII (Export)
Tune-Up..... 1 / 10

CONNEX RADIOS
3300
Tune-Up..... 1 / 10
Super-Talk Installation..... 4 / 18
10 KHz Jump Modification..... 4 / 19
Variable Adjustments..... 5 / 45

CONVOY RADIOS
CON-400
Tune-Up..... 1 / 11
Tune-Up (Correction for Old Volt).. 3 / 05
CON-430
CON-450
Tune-Up..... 1 / 11

COURIER RADIOS
BLAZER 40D
Tune-Up..... 1 / 11
CADET
CARAVELLE II
CARAVELLE 40D
CENTURIAN 23
CENTURIAN 40D
Tune-Up..... 1 / 11
CENTURIAN PLL40
Tune-Up..... 1 / 11
Variable Adjustments..... 5 / 45
CLASSIC II
Tune-Up..... 1 / 11
CLASSIC III
CLASSIC IV
CLASSIC PLL40
CONQUEROR II
CONQUEROR 40D
CRUISER
Tune-Up..... 1 / 11
GALAXY
GALAXY IV
GALAXY V
GALAXY VI
Tune-Up..... 1 / 11
GLADIATOR
NIGHTRIDER 40DR
RANGLER 40D
REBEL 23+
REBEL 40A
REBEL PLL
REDBALL
RENEGADE 40
ROGUE 40
SPARTAN SSB
TRAVELLER II
Tune-Up..... 1 / 11

C.P.I. RADIOS
CP400
Tune-Up..... 1 / 11

CRAIG RADIOS
4101 4104
4102 4201
4103
Tune-Up..... 1 / 12
L-101
Tune-Up..... 1 / 12
Variable Adjustments..... 6 / 31
L-102
Tune-Up..... 1 / 12
Variable Adjustments..... 6 / 31
L-103
Tune-Up..... 1 / 12
Variable Adjustments..... 6 / 31
L-104
Power Modification..... 1 / 51
Tune-Up..... 1 / 12
Variable Adjustments..... 6 / 32
L-131
Tune-Up..... 1 / 12
Variable Adjustments..... 6 / 32
L-132
L-150
Tune-Up..... 1 / 12
L-231
Tune-Up..... 1 / 12
Variable Adjustments..... 4 / 45
Variable Adjustments..... 6 / 32
L-232
L-600
Tune-Up..... 1 / 12

Master Index *(For Volume 1 Thru Volume 7)*

DAK RADIOS (SCOTT-DAK)
MARK II
MARK V
Tune-Up ..... 1 / 12
MARK IX
Tune-Up ..... 1 / 12
MARK X
Channel Conversion ..... 3 /09-10
Clarifier Modification ..... 5 / 26
Power Modification ..... 3 /07-08
Repair Tip ..... 2 / 32
Tune-Up ..... 1 / 12

DIRLAND RADIOS
77-099
Tune-Up ..... 6 / 05
Variable Adjustments ..... 6 / 32
SS-3000B
Tune-Up ..... 7 / 04
Variable Adjustments ..... 7 / 39
SS-3900
Channel Conversion ..... 6 / 12
Channel Conversion Chart ..... 6 / 13
25MHz Channel Conversion ..... 6 / 14
29MHz Channel Conversion ..... 6 / 15
+10MHz Freq. Jump Modification ..... 6 / 16
Roger Beep Modification ..... 6 / 12
Switchable Talk-Back Modification ..... 6 / 16
SUPER-TALK Installation Inst ..... 6 / 17
Tune-Up ..... 6 / 05
Variable Adjustments ..... 6 / 32
SS-3903B
Channel Conversion ..... 6 / 12
Channel Conversion Chart ..... 6 / 13
25MHz Channel Conversion ..... 6 / 14
29MHz Channel Conversion ..... 6 / 15
+10MHz Freq. Jump Modification ..... 6 / 16
Roger Beep Modification ..... 6 / 12
Switchable Talk-Back Modification ..... 6 / 16
SUPER-TALK Installation Inst ..... 6 / 17
Tune-Up ..... 6 / 05
Variable Adjustments ..... 6 / 32

EAGLE RADIOS
EAGLE 2000
Channel Conversion ..... 7 / 07
Channel Conversion Chart ..... 7 / 10
Tune-Up ..... 7 / 04
Variable Adjustments ..... 7 / 39
EAGLE 5000
Channel Conversion ..... 7 / 12
Spec Sheet Info ..... 7 / 11
Tune-Up ..... 7 / 04
Variable Adjustments ..... 7 / 39

ECHO RADIOS
ECHO 49er
ECHO 99er
Tune-Up ..... 1 / 12

EMPEROR RADIOS
TS-5010
Comparison Chart ..... 6 / 07
Channel Conversion ..... 6 / 08
RIT Modification ..... 6 / 09,10
Mike Wiring Chart ..... 6 / 10
Alignment Layout ..... 6 / 11
Tune-Up ..... 6 / 05
Variable Alignments (Main Board) ..... 6 / 11
Variable Alignments (Main Board) ..... 6 / 32

EXCALIBUR RADIOS-See GALAXY RADIOS

FALCON RADIOS
2000
Tune-Up ..... 1 / 12
Variable Adjustments ..... 1 / 65

FANON RADIOS
10-40 AM/FM/CB
FANFARE 100
FANFARE 100FI
FANFARE 120
FANFARE 125F
FANFARE 182F
Tune-Up ..... 1 / 12
FANFARE 184DF
FANFARE 185DF
FANFARE 185PLL
Tune-Up ..... 1 / 13

FANFARE 190DF
Tune-Up ..... 1 / 13
Variable Adjustments ..... 5 / 46
FANFARE 350F
FANFARE 700
FANFARE 880
FANFARE 880DF
SFT-400
SFT-500
SFT-900
T-600
T-700
T-800
T-1000C
Tune-Up ..... 1 / 13

FIELDMASTER RADIOS
MICRO-MINI 40
Tune-Up ..... 1 / 13

FORMAC RADIOS
40
88 Am/Fm Export
Tune-Up ..... 1 / 13
Variable Adjustments ..... 4 / 45
240
Tune-Up ..... 1 / 13
Variable Adjustments ..... 1 / 63
Variable Adjustments ..... 4 / 45
700
Tune-Up ..... 1 / 13
Variable Adjustments ..... 1 / 63

FOX RADIOS
CB-240
CB-340
CB-440
CB-911 (Emergency Radio)
Tune-Up ..... 1 / 13
Variable Adjustments ..... 4 / 46

FULCOMM RADIOS
2303
2330
Tune-Up ..... 1 / 13

FUZZBUSTER RADIOS
Z-40
Z-50
Z-80
Tune-Up ..... 1 / 14

GALAXY RADIOS
33PLUS
Tune-Up ..... 1 / 14
44V
Channel Conversion ..... 5 / 19
2100
Tune-Up ..... 1 / 14
DX 33 HML
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 14
DX 33 HML (EPT 360014B Board)
Channel Conversion ..... 7 / 18
Channel Chart ..... 7 / 19
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
DX 44V (EPT 360014B Board)
Channel Conversion ..... 5 / 19
Channel Conversion ..... 7 / 20
Channel Chart ..... 6 / 36
Channel Chart ..... 7 / 22
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 14
DX 55V (EPT 360014B Board)
Channel Conversion ..... 7 / 23
Channel Chart ..... 7 / 24
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
DX 66V (EPT 360014B Board)
Channel Conversion ..... 6 / 26
Channel Conversion Chart ..... 6 / 26
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
DX 77HML (EPT 360014B Board)
Channel Conversion ..... 5 / 19
Channel Chart ..... 6 / 36
SuperTalk Installation ..... 7 / 28
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
DX 77V (EPT 360014B Board)
Channel Conversion ..... 5 / 19
DX 88HL
Power Modification ..... 1 / 51
SuperTalk Installation ..... 7 / 28
Tune-Up ..... 1 / 14
DX 99V
Channel Conversion ..... 7 / 25
Channel Conversion Chart ..... 7 / 27
Tune-Up ..... 7 / 05
Variable Alignments ..... 7 / 40
EXCALIBUR SSB (SRT-3600-10 Board)
Power Modification ..... 1 / 51
EXCALIBUR SSB (EPT360010Z Board)
Power Modification ..... 1 / 51
Variable Adjustments ..... 1 / 64
EXCALIBUR SSB (PTMBM121D4X Board)
Variable Adjustments ..... 1 / 64
GALAXY II
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 14
JUPITER
Channel Chart ..... 3 / 31
Tune-Up ..... 3 / 04
MARS
Tune-Up ..... 2 / 03
Power Modification ..... 2 / 08
Variable Adjustments ..... 2 / 33
MIRAGE 44 (EPT 360014B Board)
Channel Chart ..... 6 / 36
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
PLUS
Tune-Up ..... 1 / 14
MIRAGE 44 (EPT 360014B Board)
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
MIRAGE 88 (EPT 360014B Board)
Tune-Up ..... 7 / 05
Variable Alignments ..... 7 / 40
PLUTO
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 14
PLUTO (EPT 360014B Board)
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
SATURN
Alignmant Procedure ..... 4 / 38
Echo Board Schematic ..... 5 / 41
Echo Board IC Pin-Out ..... 5 / 42
Eliminating Freq. Counter Noise ..... 3 / 24
Flow Chart Info ..... 4 / 37
Frequency Counter Schematic ..... 5 / 36
Frequency Counter IC Pin-Out ..... 5 / 38
Frequency Counter Voltage Chart ..... 5 / 38
PLL Operation & Theory ..... 4 / 36
Power Supply Schematic ..... 4 / 40
Power Supply Layout & Parts ..... 4 / 41
Repair Tip (Freq Counter) ..... 1 / 60
Repair Tip (Distortion) ..... 1 / 61
Repair Tip ..... 2 / 31
Repair Tip ..... 5 / 44
Tune-Up ..... 1 / 14
VCO Output Chart ..... 5 / 37
SATURN (EPT360010A Board)
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 14
Variable Adjustments ..... 1 / 62
SATURN (EPT360011B Board)
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 14
Variable Adjustments ..... 1 / 62
SATURN II (EPT 360014B Board)
Tune-Up ..... 6 / 05
Variable Alignments ..... 6 / 33
SIRIUS
Channel Conversion ..... 5 / 07
Channel Conversion Chart ..... 5 / 08
Tune-Up ..... 4 / 04
Variable Adjustments ..... 4 / 04
SUPER GALAXY
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 14

GEMTRONICS RADIOS
GR-11930
GT-44
GT-55
GT-230
Tune-Up ..... 1 / 14

GT-55
Channel Conversion ..... 2 / 11-14
Tune-Up ..... 1 / 14
GTX-23
GTX-36
Tune-Up ..... 1 / 14
GTX-44 (Same as GT44)
Channel Conversion ..... 2 / 11-14
Tune-Up ..... 1 / 14
GTX-66
Channel Conversion ..... 2 / 11-14
GTX-77
GTX-230
GTX-2325
GTX-3000
Tune-Up ..... 1 / 14
GTX-3323
Tune-Up ..... 1 / 14
Variable Adjustments ..... 4 / 46
GTX-4040
GTX-5000
Tune-Up ..... 1 / 14

GENERAL ELECTRIC RADIOS
3-5800A
3-5801A
3-5804
3-5804A
Tune-Up ..... 1 / 15
Tune-Up ..... 5 / 04
3-5804B
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 15
3-5804D
Channel Conversion ..... 2 / 11-14
Power Modification ..... 1 / 52
Tune-Up ..... 1 / 15
3-5804G
3-5804F
3-5805A
3-5805B
Tune-Up ..... 1 / 15
3-5806
Tune-Up ..... 1 / 15
Variable Adjustments ..... 4 / 46
3-5806A
Tune-Up ..... 1 / 15
3-5809B & 3-5809C
Tune-Up ..... 3 / 04
Variable Adjustments ..... 3 / 34
3-5810A
3-5810B
3-5811B
Channel Conversion ..... 2 / 11-14
Tune-Up ..... 1 / 15
3-5812A
Channel Conversion ..... 2 / 11-14
Tune-Up ..... 1 / 15
3-5813A
Tune-Up ..... 1 / 15
Variable Adjustments ..... 4 / 46
3-5813B
Channel Conversion ..... 2 / 11-14
Power Modification ..... 1 / 52
Tune-Up ..... 1 / 15
3-5814A
3-5814B
3-5814D
Tune-Up ..... 1 / 15
3-5815A
Tune-Up ..... 1 / 15
3-5816A
Tune-Up ..... 1 / 15
Variable Adjustments ..... 4 / 46
3-5817A
3-5818A
Tune-Up ..... 1 / 15
3-5819A
Channel Conversion ..... 2 / 11-14
Tune-Up ..... 1 / 15
Variable Adjustments ..... 5 / 46
3-5819B
3-5821A
3-5821B
3-5825A
3-5825B
Tune-Up ..... 1 / 15
3-5826A
Tune-Up ..... 1 / 15
Variable Adjustments ..... 4 / 46

Master Index *(For Volume 1 Thru Volume 7)*

3-5827A
3-5830
3-5869A
3-5871A
3-5771B
Tune-Up..... 1 / 15
3-5875A (SUPERBASE)
Tune-Up..... 1 / 15
3-5900A
Tune-Up..... 1 / 15

GENERAL MOTORS RADIOS
4120
4145
4175
4230
Tune-Up..... 1 / 16
70BFMCE 90BFPC1
80BCB1 90BFTC1
80BCB2 90EC81
80BFTC1 91YFMC1
86KFTC1
90BCB1
90BFMC1
Tune-Up..... 1 / 16
CBD-10
CBD-12
CBD-20 (90BCB2)
CBD-203 AM/FM/CB
Tune-Up..... 1 / 16
GM23B
GM23C
GM123A
GM130
Tune-Up..... 1 / 16

GLOBE RADIOS
9000
9001
Tune-Up..... 1 / 16

GRANADA RADIOS
CB-6
CB-7
FCB-27
Tune-Up..... 1 / 16

GRAN PRIX RADIOS
1125
D-1325RF
Tune-Up..... 1 / 16

GREAT RADIOS
GT-81B
GT-83B
Tune-Up..... 1 / 17

HAM INTERNATIONAL RADIOS
CONCORDE II
Tune-Up..... 1 / 17
Variable Adjustments..... 1 / 64
CONCORDE III
Tune-Up..... 1 / 17
Variable Adjustments..... 1 / 64
JUMBO III
Tune-Up..... 1 / 17
Variable Adjustments..... 1 / 64

MAJOR 120 (EXPORT)
Tune-Up..... 1 / 17
MAJOR M-360
Tune-Up..... 1 / 17
MUTIMODE III
Tune-Up..... 1 / 17
Variable Adjustments..... 1 / 64

HANDIC RADIOS
199 605
230 605DL
235 2305
240(AM/FM/CB) 3605
305
Tune-Up..... 1 / 17

HITACHI RADIOS
CM-2375H CM-2425H
CM-2400C CM-4800C/H
CM-2400H
Tune-Up..... 1 / 17

HUNTER RADIOS
Hunter 120
Tune-Up..... 4 / 04

HYGAIN RADIOS
670B
670B-PR
672B
2679A
2680
Tune-Up..... 1 / 17
2681
2682
2683
2701
2702
2703
2705
2710X
2720
Tune-Up..... 1 / 18
2795
Tune-Up..... 1 / 18
Variable Adjustments..... 1 / 64
2795DX
Tune-Up..... 1 / 18
Variable Adjustments..... 1 / 64
3077
Tune-Up..... 1 / 18
8795 (Hygain V)
Tune-Up..... 1 / 18
Variable Adjustments..... 1 / 65
Hy-Gain I
Hy-Gain II
Hy-Gain VII
Hy-Gain VIII (3078)
Hy-Gain 9 (2679)
Hy-Gain 16 (2716)
Tune-Up..... 1 / 18
Hy-Range I
Hy-Range Ia
Hy-Range II
Hy-Range IIa
Hy-Range III (672)
Hy-Range IV (673)
Hy-Range V (674A)
Hy-Range V (674B)
Tune-Up..... 1 / 18

ITT RADIOS
CB-4000
4000
4400M
Tune-Up..... 1 / 18

INTEK RADIOS
1200FM
Variable Adjustments..... 1 / 64
2000FM
Tune-Up..... 1 / 18

JC PENNY RADIOS
981-6203
Tune-Up..... 1 / 18
981-6204 (6204)
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 18
981-6212A
Tune-Up..... 1 / 18
981-6213
981-6216 (981-3130)
Tune-Up..... 1 / 19
981-6218
Tune-Up..... 1 / 19
Variable Adjustments..... 3 / 34
981-6221
Tune-Up..... 1 / 19
Variable Adjustments..... 4 / 46
981-6225
981-6235
Tune-Up..... 1 / 19
981-6237 (6237)
Power Modification..... 1 / 52
Tune-Up..... 1 / 19
981-6238
Tune-Up..... 4 / 05
Variable Adjustments..... 4 / 05
981-6240
981-6241
981-6246
Tune-Up..... 1 / 19
981-6247
Tune-Up..... 1 / 19
Clarifier Modification..... 5 / 25
981-6248
981-6255
Tune-Up..... 1 / 19

JIL RADIOS
606CB
615CB
825CB
860CB
SSB-M6
Tune-Up..... 1 / 19

JOHNSON RADIOS
110 125
120A 130
121A 132
123 250
123A 320
123B 323
123SJ 323M
Tune-Up..... 1 / 19
Messenger 40
Messenger 50
Tune-Up..... 1 / 19
Messenger 80
Messenger 323A
Messenger 351
Tune-Up..... 1 / 20
Messenger 4120 Messenger 4175
Messenger 4125 Messenger 4190
Messenger 4135 Messenger 4230
Messenger 4140 Messenger 4250
Messenger 4145 Messenger 4730
Messenger 4170
Tune-Up..... 1 / 20
Viking 200 Viking 430
Viking 230 Viking 4330
Viking 260 Viking 4360
Viking 270 Viking 4740
Viking 352
Tune-Up..... 1 / 20

K-40 RADIOS
K40-1
K40-2
K40-3
K40-6
Tune-Up..... 1 / 20
K40-7
Power Modification..... 1 / 52
Tune-Up..... 1 / 20
K401(AM)
K40 SSB
Trucker Model
Tune-Up..... 1 / 20

K-MART RADIOS
D-40
K-605
Tune-Up..... 1 / 20
KINGHOOD RADIOS
K-195
Tune-Up..... 1 / 21

KRACO RADIOS
CCB-4007
KB-2355
KB-4045
KCB-1300
KCB-1307
Tune-Up..... 1 / 21
KCB-1401
Tune-Up..... 1 / 21
Variable Adjustments..... 4 / 47
KCB-2310A
Power Modification..... 1 / 52
Tune-Up..... 1 / 21
KCB-2320
Tune-Up..... 1 / 21
KCB-2320A
Power Modification..... 1 / 52
Tune-Up..... 1 / 21
KCB-2320B
Power Modification..... 1 / 52
Tune-Up..... 1 / 21
KCB-2330B
Power Modification..... 1 / 52
Tune-Up..... 1 / 21
KCB-2340 KCB-4005
KCB-2370 KCB-4006
KCB-2390 KCB-4007
KCB-4000 KCB-4009
KCB-4001 KCB-4010
KCB-4003 KCB-4020
KCB-4004
Tune-Up..... 1 / 21
KCB-4030
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 21
KCB-4045
Channel Conversion..... 2 / 11
KCB-4060 KCB-4095
KCB-4070 KCB-5001
KCB-4088 KCB-5003
KCB-4090
Tune-Up..... 1 / 21
KRIS RADIOS
Kris 99/er XL-25
Vega XL-45
Victor XL-50
Victor II XL-70
XL-23A
Tune-Up..... 1 / 22
LAFAYETTE RADIOS
1800
Tune-Up..... 1 / 23
Variable Adjustments..... 1 / 65
2400-FM
Tune-Up..... 1 / 23
Variable Adjustments..... 1 / 65
CHB-740
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 22
COM-PHONE -Mark II
COM-PHONE-23
COM-PHONE-23A
COMSAT-35
Tune-Up..... 1 / 22
COMSAT-525
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 22
DYNA-COM 40
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 22
HB-525F
HB-550
HB-625A
Tune-Up..... 1 / 22
HB-640
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 22
HB-650
HB-700
HB-740
HB-750
Tune-Up..... 1 / 22
HB-870AFS
Tune-Up..... 1 / 22
Variable Adjustments..... 1 / 64
HB-940
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 22
HB-950
HB-4000
LM-100
LM-200
LM-300
LM-400
MB-740
MICRO-223A
MICRO-723
Tune-Up..... 1 / 22
TELSAT-925
TELSAT-1000
TELSAT-1023
TELSAT-1050
Tune-Up..... 1 / 23
TELSAT-1140
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 23
TELSAT-1240
Tune-Up..... 1 / 23
TELSAT SSB-25A
TELSAT SSB-50A
TELSAT SSB-75
TELSAT SSB-100
Tune-Up..... 1 / 23
TELSAT SSB-140
Tune-Up..... 1 / 23

Master Index *(For Volume 1 Thru Volume 7)*

Variable Adjustments..... 6 / 34

LAKE RADIOS
410
450
Tune-Up..... 1 / 23
600
Tune-Up..... 1 / 23
Variable Adjustments..... 4 / 47
650
750
5000 (SN-16)
5100 (SN-14)
Tune-Up..... 1 / 23

LINCOLN RADIOS
1500
Tune-Up..... 1 / 23

MARKO RADIOS
CB-444
Tune-Up..... 1 / 23

MAXON RADIOS
LP-27
Tune-Up..... 2 / 03
MCB-25
MCB-30
Tune-Up..... 6 / 05
Variable Adjustments..... 6 / 34
MCB-60
Tune-Up..... 7 / 05
Variable Adjustments..... 7 / 40

MEDALLION RADIOS
63-030
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 23
63-200 63-540
63-240
Tune-Up..... 1 / 23

METROSOUND RADIOS
CB-1
Tune-Up..... 1 / 24

MIDLAND RADIOS
13-700 13-779
13-729 13-796
Tune-Up..... 1 / 24
13-830
Power Modification..... 1 / 52
Tune-Up..... 1 / 24
13-845 13-871
13-852 13-879
13-853 13-879B
13-854 13-881
13-857 13-882
13-858 13-882B
13-862 13-882C
13-862B 13-883
13-863 13-883B
13-863B 13-884
13-866 13-886
13-867 13-887
13-870D
Tune-Up..... 1 / 24
13-888B
Power Modification..... 1 / 52
Tune-Up..... 1 / 24
13-892 13-895
13-893 13-896
13-894
Tune-Up..... 1 / 24
13-898
13-898B
Tune-Up..... 1 / 25
13-955
Power Modification..... 1 / 52
Tune-Up..... 1 / 25
13-976
Tune-Up..... 1 / 25
52-100 (Caravan) 63-445
Tune-Up..... 1 / 25
63.445
Variable Adjustments..... 6 / 34
75-900
Tune-Up..... 7 / 05
76-300 (Am Base)
Power Modification..... 1 / 52
Tune-Up..... 1 / 25

76-858
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 25
76-860
Tune-Up..... 1 / 25
Variable Alignments..... 3 / 35
76-863
76-886
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 25
77-003(3001)
Tune-Up..... 1 / 26
Variable Adjustments..... 4 / 47
77-092
Tune-Up..... 5 / 04
Variable Adjustments..... 5 / 04
77-094
Tune-Up..... 1 / 25
Variable Adjustments..... 3 / 35
77-099
Power Modification..... 1 / 52
Tune-Up..... 1 / 25
77-101B
77-101C
Tune-Up..... 1 / 25
Variable Adjustments..... 4 / 47
77-102(102M)
Variable Adjustments..... 4 / 47
77-104
Tune-Up..... 1 / 25
Variable Adjustments..... 3 / 35
Variable Adjustments..... 4 / 47
77-104XL
Tune-Up..... 7 / 05
Variable Adjustments..... 7 / 40
77-106
Tune-Up..... 1 / 25
Variable Adjustments..... 3 / 35
77-112
Tune-Up..... 1 / 25
77-116
Power Modification..... 1 / 53
Tune-Up..... 1 / 25
Variable Adjustments..... 3 / 35
77-118
Power Modification..... 1 / 53
Tune-Up..... 1 / 25
77-145
77-149
77-151(151M)
77-155
Tune-Up..... 1 / 25
77-160
Tune-Up..... 3 / 35
Variable Adjustments..... 5 / 04
77-200 (200M)
Tune-Up..... 1 / 26
Variable Adjustments..... 6 / 34
77-202/A
Tune-Up..... 1 / 25
77-202B
Tune-Up..... 3 / 04
Variable Adjustments..... 3 / 35
77-225A
Tune-Up..... 1 / 25
77-250 & 77-250G (Power Max)
Power Modification..... 1 / 53
Tune-Up..... 1 / 25
77-285
Tune-Up..... 6 / 05
77-808
Tune-Up..... 1 / 25
Variable Adjustments..... 4 / 47
77-821
Tune-Up..... 1 / 25
77-824
Tune-Up..... 1 / 25
77-824B
Tune-Up..... 1 / 25
Variable Adjustments..... 4 / 47
77-824C
Tune-Up..... 1 / 25
Variable Adjustments..... 4 / 47
77-825
Tune-Up..... 1 / 25
77-830
77-838
77-849
Channel Conversion..... 2 /11-14
Tune-Up..... 1 / 25

77-853
77-856
Tune-Up..... 1 / 25
77-857
Channel Conversion..... 2 /11-14
Tune-Up..... 1 / 25
77-859
77-861
Tune-Up..... 1 / 25
77-861B
77-865
Tune-Up..... 1 / 26
77-882
Channel Conversion..... 2 /11-14
Tune-Up..... 1 / 26
77-883
Tune-Up..... 1 / 26
77-888
77-899
77-899
77-955
77-963
Channel Conversion..... 2 /11-14
Tune-Up..... 1 / 26
78-574
Tune-Up..... 1 / 26
Variable Adjustments..... 3 / 35
Variable Adjustments..... 6 / 34
78-976
Tune-Up..... 1 / 26
79-999
Tune-Up..... 1 / 26
Variable Adjustments..... 3 / 35
79-012 (6001)
79-285
79-891
79-892
79-893
79-900 (Old Model)
79-900 (New Model)
Tune-Up..... 1 / 26
100M
101M
102M
103M
104M
105M (77-150)
Tune-Up..... 1 / 26
200M (77-200)
Power Modification..... 2 / 08
Power Modification..... 1 / 52
Tune-Up..... 1 / 26
Variable Adjustments..... 6 / 34
1001 (Export Model)
Tune-Up..... 1 / 26
Variable Adjustments..... 4 / 47
3001(77-003)
Tune-Up..... 1 / 26
Variable Adjustments..... 4 / 47
4001
Tune-Up..... 1 / 26
5001 (77-005)
Tune-Up..... 1 / 26
Variable Adjustments..... 3 / 35
6001 (79-012 only)
Tune-Up..... 1 / 26
6001 (79-006)
Tune-Up..... 1 / 27
6001 (uPD 2824 chip)
Tune-Up..... 1 / 27
7001
Tune-Up..... 1 / 27
7001 (uPD 2824 chip)
Tune-Up..... 1 / 27
7001 (79-007)
Variable Adjustments..... 6 / 34
7001 (Export)
Tune-Up..... 1 / 27
Variable Adjustments..... 1 / 65

MONGOOSE RADIOS
2000
Variable Adjustments..... 1 / 65

MOPAR RADIOS
4094173
Tune-Up..... 1 / 27
4094178 4094178
4094177 4094179

Channel Conversion..... 2 / 11
Tune-Up..... 1 / 27

MONTGOMERY WARDS RADIOS
(SEE WARDS RADIOS)

MORSE/ELECTROPHONIC RADIOS
CB-700 CB-2000
CB-800 2001
Tune-Up..... 1 / 27
3005
Channel Conversion..... 2 / 11
Tune-Up..... 1 / 27

MOTOROLA RADIOS
CB550 CT950AX
CB555 T-4000A
CF925AX T-4005A
CM-540 T-4009A
CM-550 T-4010A
CM-555 T-4020A
Tune-Up..... 1 / 27
T-4025A
Tune-Up..... 1 / 28

NATO RADIOS
2000
Variable Adjustments..... 1 / 65

N.D.I. RADIOS
PC101 PC-200
PC102 PC-201
Tune-Up..... 1 / 28

NUVOX RADIOS
TC-5020
CB-7000
Tune-Up..... 1 / 28

OLSON RADIOS
CB-409
Tune-Up..... 1 / 28

OMNIVOX RADIOS
CB-1000
Tune-Up..... 1 / 28

ORBITSONIC RADIOS
200
Tune-Up..... 1 / 28

PACE RADIOS
2313A 2300C
1000MC 2376B
Tune-Up..... 1 / 28
8003
8008
8010A
8014A
8015A
Tune-Up..... 1 / 28
8016
Tune-Up..... 1 / 28
Variable Adjustments..... 4 / 48
8025
8041
8046
Tune-Up..... 1 / 28
8047
8092
8093
8113
8117
Tune-Up..... 1 / 29
8155
Tune-Up..... 1 / 28
Variable Adjustments..... 4 / 48
8193
Tune-Up..... 1 / 28
Variable Adjustments..... 4 / 48
8340
Tune-Up..... 1 / 28
CB-76 CB-162
CB-113 CB-166 (23 Ch.)
CB-144 CB-166C (40 Ch.)
CB-145 CB-185
CB-161
Tune-Up..... 1 / 29
CB-8001
CB-8001 (New Model)
CB-8002

Master Index *(For Volume 1 Thru Volume 7)*

Tune-Up ..... 1 / 29
CBST-23 (Sidetalk 23) ..... 1 / 30
SIDETALK 1000B
SIDETALK 1000BC
SIDETALK 1000M
SIDETALK CB-1023
Tune-Up ..... 1 / 29

PACER RADIOS
Tune-Up ..... 5 / 05

PACIFIC RADIOS
160
Variable Adjustments ..... 1 /65

PAL RADIOS
COYOTE23
ROADRUNNER 23
Tune-Up ..... 1 / 29

PALOMAR RADIOS
SSB-500
Channel Conversion (MC145106) ..... 5 / 20
Clarifier Modification ..... 5 / 21
Tune-Up ..... 1 / 30
Variable Adjustments ..... 3 / 36
21
49
Tune-Up ..... 1 / 29
1200 (Export)
Tune-Up ..... 1 / 29
Variable Adjustments ..... 1 / 63
2400
Tune-Up ..... 1 / 29
Variable Adjustments ..... 1 / 65
2900
4100
Tune-Up ..... 1 / 29
5000
Tune-Up ..... 1 / 30
Variable Adjustments ..... 1 / 65

PANASONIC RADIOS
RJ-3050 RJ-3450
RJ-3100 RJ-3600
RJ-3150 RJ-3600
RJ-3200 RJ-3700
RJ-3250
Tune-Up ..... 1 / 30
CQ-B5919EU
CR-B1717EU
CR-B4723EU
CR-B4747EU
Tune-Up ..... 1 / 30

PARADYNAMICS RADIOS
PDC19
Tune-Up ..... 5 / 05
Variable Adjustments ..... 5 / 05
PDC25
Tune-Up ..... 5 / 05
Variable Adjustments ..... 5 / 05
PDC29
Tune-Up ..... 5 / 05
Variable Adjustments ..... 5 / 05

PEARSE-SIMPSON RADIOS
ALLEYCAT 23
BEARCAT 23C
BENGAL SSB
BOBCAT 23B
BOBCAT 23D
BOBCAT 23E
Tune-Up ..... 1 / 30
CHEETAH SSB
Tune-Up ..... 1 / 30
Tune-Up (Correction) ..... 3 / 05
COUGAR 23
COUGAR 23B
JAGUAR 40B
LEOPARD B
Tune-Up ..... 1 / 30
LION 40
Channel Conversion ..... 2 /11-14
Tune-Up ..... 1 / 30
LYNX 23
Tune-Up (Correction) ..... 3 / 05
MARK II
Power Modification ..... 1 / 53
Tune-Up ..... 1 / 30
PANTHER SSB

PUMA 23B
Tune-Up ..... 1 / 30
PUMA 23C
Tune-Up ..... 1 / 31
PUSSYCAT 23
SIMBA SSB (Late Model)
SUPER LYNX
SUPER TIGER 40A
TIGER 23B
TIGER 23C
TIGER 23D
Tune-Up ..... 1 / 31
TIGER 40
Channel Conversion ..... 2 /11-14
Tune-Up ..... 1 / 31
TIGER 40A
Power Modification ..... 1 / 53
Variable Adjustments ..... 3 / 36
TOMCAT 23B
TOMCAT 23C
Channel Conversion ..... 2 /11-14

PIONEER RADIOS
GT-600 GT-6600
GT-1100G
Tune-Up ..... 1 / 31

PRESIDENT / UNIDEN RADIOS
ADAMS
Tune-Up ..... 1 / 31
ANDREW "J"
Power Modification ..... 1 / 53
Super-Talk Installation ..... 2 / 06
Tune-Up ..... 1 / 31
AR-7, AX-7
Power Modification ..... 1 / 53
Tune-Up ..... 1 / 31
Variable Adjustments ..... 4 / 50
AR-14, AX-14
Power Modification ..... 1 / 58
Tune-Up ..... 1 / 31
AR-44, AX-44
Power Modification ..... 1 / 58
Super-Talk Installation ..... 2 / 06
Tune-Up ..... 1 / 31
AR-144, AX-144
Clarifier Modification ..... 4 / 30
Power Modification ..... 1 / 59
Tune-Up ..... 1 / 31
Variable Adjustments ..... 4 / 50
AR-711,AX711
Power Modification ..... 1 / 58
Super-Talk Installation ..... 2 / 06
Tune-Up ..... 1 / 31
Variable Adjustments ..... 4 / 50
AX4 AX-7
AX-11 AX-24
AX-43
AX-52
AX-55
Tune-Up ..... 1 / 31
CONVOY II
Power Modification ..... 1 / 53
Tune-Up ..... 1 / 31
Variable Adjustments ..... 4 / 50
DWIGHT D (858 PLL)
Channel Conversion ..... 2 /15-17
Power Modification ..... 1 / 54
Tune-Up ..... 1 / 31
DWIGHT D (1003002)
Power Modification ..... 1 / 59
Tune-Up ..... 1 / 46
GRANT (858 PLL)
Channel Conversion#1 ..... 2 /18,19
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Power Modification ..... 1 / 54
Repair Tip (Relay Buzzing) ..... 1 / 60
Tune-Up ..... 1 / 31
Widebanding Procedure ..... 2 / 20
GRANT (8719 PLL)
Channel Conversion(Switch) ..... 2 / 24
Clarifier Conversion ..... 2 / 25
Clarifier Conversion(Update) ..... 3 / 25
Power Modification ..... 1 / 53
Repair Tip (Regulator Failure) ..... 1 / 60
Tune-Up ..... 1 / 46
GRANT (Export)
Channel conversion ..... 2 / 28
Clarifier Conversion ..... 2 / 29

GRANT-DX
Power Modification ..... 1 / 51
Tune-Up ..... 1 / 31
Variable Adjustments ..... 4 / 50
GRANT-XL
Channel Conversion(Switch) ..... 5 / 09
Channel Conversion(Rotary) ..... 5 / 12
Clarifier Conversion ..... 5 / 13
Clarifier Conversion(Update) ..... 7 / 35
Tune-Up ..... 5 / 05
Super-Slide Conversion ..... 5 / 14
Super-Slide Conversion(Update) ..... 7 / 36
HONEST ABE
Channel Conversion ..... 2 /15-17
Power Modification ..... 1 / 54
Super-Talk Installation ..... 3 / 28
Tune-Up ..... 1 / 32
HR-2510
Channel Modification ..... 5 / 23
External Speaker Mod. Jack ..... 3 / 29
Tune-Up ..... 1 / 46
HR-2510 (New release summer 95)
Tune-Up ..... 7 / 05
HR-2600
Channel Modification ..... 5 / 24
RIT Modification ..... 5 / 24
Tune-Up ..... 5 / 05
JACKSON (Old Version)
Tune-Up ..... 1 / 32
Variable Adjustments ..... 1 / 64
JACKSON (New Export Model P9-042AG)
Tune-Up ..... 1 / 32
Variable Adjustments ..... 1 / 63
JAMES K
Tune-Up ..... 1 / 32
JFK
Tune-Up ..... 1 / 32
Variable Adjustments ..... 1 / 63
JOHN Q
Channel Conversion ..... 2 /15-17
Power Modification ..... 1 / 54
Tune-Up ..... 1 / 32
LINCOLN
External Speaker Mod. Jack ..... 3 / 29
Repair Tip ..... 2 / 32
Tune-Up ..... 1 / 32
MADISON (858 PLL)
Channel Conversion#1 ..... 2 /18,19
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Power Modification ..... 1 / 54
Power Supply Schematic & Mod ..... 5 / 29,30
Repair Tip (Relay Buzzing) ..... 1 / 60
Tune-Up ..... 1 / 32
Widebanding Procedure ..... 2 / 20
Variable Adjustments ..... 1 / 65
MADISON (8719 PLL)
Channel Conversion(Switch) ..... 2 / 24
Clarifier Conversion ..... 2 / 25
Clarifier Conversion(Update) ..... 3 / 25
Power Modification ..... 1 / 53
Repair Tip (Regulator Failure) ..... 1 / 60
Tune-Up ..... 1 / 46
Variable Adjustments ..... 1 / 63
McKINLEY (8719 PLL)
Channel Conversion ..... 2 / 27
Clarifier Conversion ..... 2 / 27
Power Modification ..... 1 / 54
Repair Tip (Regulator Failure) ..... 1 / 60
Tune-Up ..... 1 / 32
Variable Adjustments ..... 4 / 50
McKINLEY (Export)
Tune-Up ..... 1 / 32
OLD HICKORY
Tune-Up ..... 1 / 32
P200
Power Modification ..... 1 / 54
Tune-Up ..... 1 / 32
P210
Tune-Up ..... 1 / 32
P220 (Same as PC66)
Power Modification ..... 1 / 53
Super-Talk Installation ..... 2 / 06
Tune-Up ..... 1 / 32
P300
Tune-Up ..... 1 / 32
P400 (8719 PLL)
Channel Conversion ..... 2 / 27
Channel Conv. w 11.1125 Xtal ..... 3 / 12
Clarifier Modification ..... 2 / 27
Power Modification ..... 1 / 54
Repair Tip (Regulator Failure) ..... 1 / 60
Super Slide Conversion ..... 3 / 14
Tune-Up ..... 1 / 32
Variable Adjustments ..... 1 / 62
PC-3
PC-9 (Emergency Radio)
PC22
Tune-Up ..... 1 / 46
PC-33
Power Modification ..... 1 / 59
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 50
PC-33X
Tune-Up ..... 1 / 46
PC-43
Tune-Up ..... 1 / 46
PC-55
Power Modification ..... 1 / 59
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 50
PC-55X
Tune-Up ..... 1 / 46
PC-66 & PC66A
Power Modification ..... 1 / 58
Super -Talk Installation ..... 2 / 06
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 50
PC-66XL
Power Modification ..... 7 / 38
Tune-Up ..... 5 / 05
PC-76XL
Power Modification ..... 7 / 38
Tune-Up ..... 5 / 05
PC-76XLW
Power Modification ..... 7 / 38
Tune-Up ..... 7 / 05
Variable Adjustments ..... 7 / 41
PC-77
Power Modification ..... 2 / 09
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 50
PC-122
Power Modification ..... 2 / 09
Tune-Up ..... 1 / 46
PC-122XL
Power Modification ..... 7 / 38
Tune-Up ..... 5 / 05
Variable Adjustments ..... 7 / 41
PC-244
Power Modification ..... 1 / 59
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 50
PC-501XL
Tune-Up ..... 7 / 05
Variable Adjustments ..... 7 / 41
PRO-500D
Power Modification ..... 1 / 58
Tune-Up ..... 1 / 46
PC-501XL
Tune-Up ..... 7 / 05
Variable Adjustments ..... 7 / 41
PRO-510e
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 51
PRO-520e
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 51
PRO-510XL
Power Modification ..... 1 / 58
Tune-Up ..... 1 / 46
Variable Alignments ..... 3 / 38
PRO-520XL
Power Modification ..... 1 / 58
Tune-Up ..... 1 / 46
Variable Adjustments ..... 3 / 38
PRO-530e
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 51
PRO-535e
Tune-Up ..... 2 / 03
Variable Adjustments ..... 3 / 38
PRO-538e
Tune-Up ..... 2 / 03
PRO-538w
Tune-Up ..... 3 / 05
Variable Adjustments ..... 3 / 38
PRO-540e
Tune-Up ..... 1 / 46
Variable Adjustments ..... 3 / 38

Master Index *(For Volume 1 Thru Volume 7)*

PRO-640e
Tune-Up ..... 1 / 46
PRO-710e
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 51
PRO-810e
Alignment Procedure ..... 4 / 32
Alignment Layout ..... 4 / 34
Block Diagram & Flow Chart ..... 5 / 31
Clarifier Modification ..... 4 / 31
Power Supply Schematic ..... 4 / 35
Tune-Up ..... 1 / 46
Voltage Chart ..... 5 / 32,33,34,35
PTC-104
Power Modification ..... 1 / 59
Tune-Up ..... 1 / 46
Variable Adjustments ..... 4 / 51
TEDDY R
Channel Conversion ..... 2 / 15-17
Power Modification ..... 1 / 54
Tune-Up ..... 1 / 32
THOMAS J
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 32
VEEP
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 32
WASHINGTON (858 PLL)
Channel Conversion #1 ..... 2 / 18,19
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Power Modification ..... 1 / 55
Power Supply Schematic & Mod ..... 5 / 29,30
Repair Tip (Relay Buzzing) ..... 1 / 60
Tune-Up ..... 1 / 32
Widebanding Procedure ..... 2 / 20
WASHINGTON (8719 PLL)
Channel Conversion ..... 2 / 27
Channel Conv. w/11.1125 Xtal ..... 3 / 13
Clarifier Conversion ..... 2 / 27
Repair Tip (Regulator Failure) ..... 1 / 60
Power Modification ..... 1 / 54
Super Slide Conversion ..... 3 / 14
Super-Talk Installation ..... 3 / 26
Tune-Up ..... 1 / 47
Variable Adjustments ..... 1 / 62
ZACHARY T (858 PLL)
Channel Conversion ..... 2 /15-17
Power Modification ..... 1 / 54
Tune-Up ..... 1 / 32
ZACHARY T (New Version)
Power Modification ..... 1 / 59
Tune-UP ..... 1 / 47

PYRAMID RADIOS
CB-22
Tune-Up ..... 1 / 32
CB-22 (NEW MODEL)
Tune-Up ..... 1 / 32
Variable Adjustments ..... 3 / 36
CB-24
Tune-Up ..... 1 / 32
Variable Adjustments ..... 3 / 36
CB-25
Tune-Up ..... 1 / 32
Variable Adjustments ..... 3 / 36
CB-26
Tune-Up ..... 1 / 32
CB-28
Tune-Up ..... 1 / 32
Variable Adjustments ..... 3 / 36
CB-29
Tune-Up ..... 1 / 32
GTL-148
Tune-Up ..... 1 / 32
1300
Tune-Up ..... 1 / 32

QUESTAR RADIOS
MARK-I
Tune-Up ..... 1 / 32

RANGER RADIOS
RCI-2900
Tune-Up ..... 1 / 33
RCI-2950
Channel Conversion ..... 4 / 42
Clarifier Modification ..... 4 / 42
Improvement Modifications ..... 4 / 43
Repair Tip (Squeal on Transmit) ..... 1 / 61
Tune-Up ..... 1 / 33
Variable Adjustments ..... 1 / 63
RCI-2970
Tune-Up ..... 5 / 05
RCI-2980
Channel Conversion ..... 7 / 13
Channel Chart ..... 7 / 16
Tune-Up ..... 7 / 05
Variable Adjustments ..... 7 / 40
RCI-2990
Channel Conversion ..... 7 / 17
Tune-Up ..... 7 / 05
Variable Adjustments ..... 7 / 40
ST-1000 / HCA818
Tune-Up ..... 6 / 06
Variable Adjustments ..... 6 / 35

RAY JEFFERSON RADIOS
CB-707 CB-845
CB-740 CB-905
Tune-Up ..... 1 / 33

REALISTIC RADIOS
TRC-10 TRC-35C
TRC-23B TRC-46
TRC-23C TRC-47
TRC-24B TRC-48
TRC-24C TRC-49
TRC-29
TRC-30
TRC-30A
Tune-Up ..... 1 / 33
TRC-50B TRC-180
TRC-52 TRC-190
TRC-55 TRC-200
TRC-56 TRC-204
TRC-57 TRC-205
TRC-61 TRC-206
TRC-67 TRC-208
TRC-68 TRC-209
Tune-Up ..... 1 / 34
TRC-210 TRC-215
TRC-211 TRC-216
TRC-212 TRC-217
TRC-214 TRC-218
Tune-Up ..... 1 / 34
TRC-410
TRC-411
TRC-412
Tune-Up ..... 1 / 34
TRC-413
Tune-Up ..... 1 / 34
Variable Adjustments ..... 4 / 48
TRC-414
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 34
TRC-415
Tune-Up ..... 1 / 34
Tune-Up ..... 3 / 05
Variable Adjustments ..... 3 / 36
TRC-416
TRC-417
TRC-418
TRC-419
Tune-Up ..... 1 / 34
TRC-420
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 34
TRC-420A
Tune-Up ..... 1 / 34
TRC-421
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 34
Variable Adjustments ..... 4 / 48
TRC-421A
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 34
TRC-422
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 35
Variable Adjustments ..... 3 / 36
TRC-422A
Power Modification ..... 1 / 55
Tune-Up ..... 1 / 35
TRC-423
Tune-Up ..... 1 / 35
TRC-424
Power Modification ..... 1 / 56
Tune-Up ..... 1 / 35
TRC-425
Power Modification ..... 1 / 56
Tune-Up ..... 1 / 35
TRC-426
Power Modification ..... 1 / 56
Tune-Up ..... 1 / 35
Variable Adjustments ..... 3 / 36
TRC-427
Power Modification ..... 1 / 56
Tune-Up ..... 1 / 35
Variable Adjustments ..... 3 / 36
TRC-428
TRC-429
Tune-Up ..... 1 / 35
TRC-431
Channel Conversion ..... 3 /22,23
Power Modification ..... 1 / 56
Tune-Up ..... 1 / 35
Variable Adjustments ..... 3 / 37
TRC-432
Tune-Up ..... 1 / 35
Super-Talk Installation ..... 5 / 27
TRC-433
Power Modification ..... 1 / 56
Tune-Up ..... 1 / 35
TRC-434
Tune-Up ..... 1 / 35
TRC-435
Tune-Up ..... 1 / 35
Tune-Up ..... 2 / 03
TRC-437
Tune-Up ..... 5 / 05
Variable Adjustments ..... 5 / 05
TRC-440
Tune-Up ..... 1 / 35
Variable Adjustments ..... 3 / 37
TRC-441
TRC-443
TRC-446
TRC-448
Tune-Up ..... 1 / 35
TRC-449
Channel Conversion #1 ..... 2 / 19
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Tune-Up ..... 1 / 35
Widebanding Procedure ..... 2 / 20
TRC-450
Tune-Up ..... 1 / 35
TRC-451
Tune-Up ..... 1 / 35`
Variable Adjustments ..... 4 / 48
Variable Adjustments ..... 5 / 46
TRC-453
Power Modification ..... 1 / 56
Tune-Up ..... 1 / 35
TRC-453
Tune-Up ..... 1 / 35
TRC-454
Tune-Up ..... 1 / 35
Variable Adjustments ..... 3 / 37
TRC-455
TRC-456
Tune-Up ..... 1 / 35
Variable Adjustments ..... 5 / 46
TRC-457
Channel Conversion #1 ..... 2 / 19
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Repair Tip (Relay Buzzing) ..... 1 / 60
Tune-Up ..... 1 / 35
Widebanding Procedure ..... 2 / 20
TRC-458
Channel Conversion #1 ..... 2 / 19
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Repair Tip (Relay Buzzing) ..... 1 / 60
Tune-Up ..... 1 / 35
Widebanding Procedure ..... 2 / 20
TRC-461
TRC-462
Tune-Up ..... 1 / 35
TRC-465
Tune-Up ..... 2 / 03
Power Modification ..... 2 / 08
TRC-466
Tune-Up ..... 1 / 35
TRC-467
Power Modification ..... 1 / 56
Power Modification ..... 2 / 08
Tune-Up ..... 1 / 35
TRC-468
Tune-Up ..... 1 / 35
TRC-469
Power Modification ..... 1 / 57
Super Talk Installation ..... 3 / 27
Tune-Up ..... 1 / 35
TRC-470
TRC-471
TRC-472
Tune-Up ..... 1 / 35
TRC-473
Tune-Up ..... 1 / 35
Variable Adjustments ..... 4 / 48
TRC-473 (New Model)
Tune-Up ..... 1 / 36
TRC-474
TRC-474 (nEW mODEL)
Tune-Up ..... 1 / 36
TRC-477
Tune-Up ..... 1 / 36
Tune-Up ..... 3 / 05
Variable Adjustments ..... 3 / 37
TRC-479
Tune-Up ..... 3 / 05
Variable Adjustments ..... 3 / 37
TRC-480
Tune-Up ..... 1 / 36
TRC-482
Tune-Up ..... 3 / 05
Variable Adjustments ..... 3 / 37
TRC-490
Channel Conversion Toggle Sw 4/ 23
Channel Chart 4/ 24
Clarifier Conversion 4/ 25
Tune-Up ..... 1 / 36
Super Talk Installation ..... 5 / 28
TRC-492
Tune-up ..... 3 / 05
Variable Adjustments ..... 4 / 48

REGENCY RADIOS
CB-1 (Info-1)
Tune-Up ..... 1 / 36
CB-2 (Info-2)
Tune-Up ..... 1 / 36
Repair Tip ..... 6 / 30
CR-185 CR-186
CB-501 CR-202
CB-701 CR-230
CR-123 CR-240
CR-123B SPRINTZ3
CR-142
Tune-Up ..... 1 / 36

RCA RADIOS
14T100
14T200
14T250
Tune-Up ..... 1 / 33
14T270
Channel Conversion ..... 2 /11-14
Tune-Up ..... 1 / 33
14T275
14T300
14T301
14T302
14T303
Tune-Up ..... 1 / 33
14T304
Channel Conversion ..... 2 /11-14
Tune-Up ..... 1 / 33
14T305
Channel Conversion ..... 2 /11-14
Tune-Up ..... 1 / 33
Variable Adjustments ..... 5 / 46
14T400
14T405
14T410
Tune-Up ..... 1 / 33

ROADMASTER RADIOS
RE-4000
RE-6000
Tune-Up ..... 1 / 36

ROBERTS RADIOS
ROBERTS 40
Tune-Up ..... 1 / 36

Master Index *(For Volume 1 Thru Volume 7)*

ROBYN RADIOS
AM-500D
Channel Conversion ..... 2 /15
Power Modification ..... 1 / 57
Tune-Up ..... 1 / 36
DG-30
Tune-Up ..... 1 / 36
DG-130A T-240D
GT-410D TR-123C
GT-V1B TR-123D
K-123
LB-23A LB-120
Tune-Up ..... 1 / 37
SB-505D
Tune-Up ..... 1 / 37
SB-510D
Alignment Procedure (See 520-D) 3 / 32
Channel Conversion#1 ..... 2 / 18
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Power Modification ..... 1 / 57
Repair Tip (Relay Buzzing) ..... 1 / 60
Tune-Up ..... 1 / 37
Widebanding Procedure ..... 2 / 20
SB-520D
Alignment Procedure ..... 3 / 32
Channel Conversion#1 ..... 2 / 18
Channel Conversion #2 (Rotary) ..... 2 / 22
Channel Conversion #3 ..... 2 / 23
Clarifier Conversion ..... 2 / 20
Power Modification ..... 1 / 57
Power Supply Schematic & Mod ..... 5 / 29, 30
Repair Tip (Relay Buzzing) ..... 1 / 60
Tune-Up ..... 1 / 37
Widebanding Procedure ..... 2 / 20
SB-540
Tune-Up ..... 1 / 37
SX-101 WW-110
SX-401 007-140
WW-23 440
WW-23A
Tune-Up ..... 1 / 37

ROYCE RADIOS
1-580 1-602A
1-582 1-605A
1-601 (Pil Version) 1-606
1-602 1-610
Tune-Up ..... 1 / 37
1-611
1-612
Tune-Up ..... 1 / 37
1-613
Tune-Up ..... 1 / 37
Variable Adjustments ..... 5 / 47
1-617
Tune-Up ..... 1 / 37
1-620
1-621
1-624
Tune-Up ..... 1 / 37
1-625
Tune-Up ..... 1 / 38
1-630 1-651
1-631 1-653
1-632 1-655
1-635 1-658
1-639 1-660
1-640 1-662
1-641 1-673
1-642 1-675
1-648 1-678
1-650 1-680
Tune-Up ..... 1 / 38
1-682
Tune-Up ..... 1 / 38
603
604
Tune-Up ..... 1 / 38
607
Tune-Up ..... 1 / 38
Variable Adjustments ..... 4 / 49
608
609
611
613
619
639
Tune-Up ..... 1 / 38

RYSTAL RADIOS
CB-523
CBR-1700
CBR-1800
Tune-Up ..... 1 / 38

SAGA RADIOS
2530
Tune-Up ..... 1 / 39

SAM RADIOS
SAM 2000
Tune-Up ..... 1 / 39

SANKYO RADIOS
SCS-555
Tune-Up ..... 1 / 39

SANYO RADIOS
TA-2000
TA-4000
TA-6000
Tune-Up ..... 1 / 39

SBE RADIOS
LCB-8
LCM-5
Tune-Up ..... 1 / 39
LCM-8
Tune-Up ..... 1 / 39
Variable Adjustments ..... 4 / 49
LCM-8P
LCM5
Tune-Up ..... 1 / 39
5CB 12CB
14CB 16CB (Console II)
21CB (Cortez) 22CB (Catalina II)
Tune-Up ..... 1 / 39
23CB (Capri II)
26CB (Formula D)
26CBIA (Formula 40)
27CB/A
29CB (Malibu)
Tune-Up ..... 1 / 39
32CB (Trinidad II)
32CB (Touchcom)
34CB (Brute)
39CB (Sidebander V)
40CB
41CB (Aspen)
Tune-Up ..... 1 / 39
42CB (Cortez)
43CB (Touch/Com 40)
44CB (Malibu 40)
45CB (Trinidad III)
47CB (Stowaway)
49CB (Tahoe)
54CB (Key/Com 1000)
Tune-Up ..... 1 / 40
TRINIDAD 23 CH.
CONSOLE V
CONSOLE VI
Tune-Up ..... 1 / 40

SEARS
242-38160700
370-38050700
Tune-Up ..... 1 / 40
562.38200700
Channel Conversion#1 ..... 2 / 30
Tune-Up ..... 1 / 40
592.38220700
Tune-Up ..... 2 / 03
663.3800900
Power Modification ..... 2 / 06
Tune-Up ..... 1 / 40
663.38090050
Tune-Up ..... 2 / 03
Power Modification ..... 2 / 09
663-38030050
663-3840500
663-38020800
Tune-Up ..... 1 / 40
663.38070700
Channel Conversion ..... 2 / 15
Tune-Up ..... 1 / 40
7531
Tune-Up ..... 1 / 40
934.36710500
934.36740500
934.36741600
934.36770500
934.36771500
934.36772600
Tune-Up ..... 1 / 40
934.38060700
934.38061700
Power Modification.(62700) ..... 2 / 09
Tune-Up ..... 1 / 40
934.38062700
Power Modification.(62700) ..... 2 / 09
Tune-Up ..... 1 / 40
934.38080700
Power Modification (62700) ..... 2 / 09
Tune-Up ..... 1 / 40
Variable Adjustments ..... 3 / 37
934.38081700
Tune-Up ..... 1 / 40
934.38110700
Tune-Up ..... 1 / 40
Variable Adjustments ..... 5 / 47
934.38120700
934.38260700
Tune-Up ..... 1 / 40
934.38270700 Base/Mobile
Channel Conversion Rotary Sw ..... 4 / 26
Channel Chart ..... 4 / 27
Clarifier Modification ..... 4 / 28
Power Supply Schematic ..... 4 / 29
Tune-Up ..... 1 / 40
934.38310700
Tune-Up ..... 1 / 40
Variable Adjustments ..... 3 / 37

SHAKESPEARE RADIOS
GBS-240
GBS-1500
GBS-2000
GBS-2500
Tune-Up ..... 1 / 41

SHARK RADIOS
SHARK 23
Tune-Up ..... 1 / 41
W-709
Tune-Up 4/ 05
Variable Adjustments 4/ 05

SHARP RADIOS
CB-500UB
CB-700
CB-750A
CB-800
CB-800A
CB-2170
CB-2260
Tune-Up ..... 1 / 41
CB-2460
Tune-Up ..... 1 / 41
Tune-Up ..... 3 / 05
CB-4370
CB-4470
CB-4670
CB-5470
Tune-Up ..... 1 / 41

SILTRONIX RADIOS
APACHE (AM-1)
CHEROKEE
MOHAWK (AM-2)
SSB-23
SSB-23A (Albatross)
Tune-Up ..... 1 / 41

SOMMERKAMP RADIOS
FL-2000DX
Tune-Up ..... 2 / 03

SOUND CREATION RADIOS
SCB-500X
Tune-Up ..... 5 / 05
Variable Adjustments ..... 5 / 05

SPARKOMATIC RADIOS
CB-40 CB-1140
CB-1040 RA-400
CB-1123 SBR-1CBM
Tune-Up ..... 1 / 41

STAG RADIOS
Stag 357
Tune-Up ..... 1 / 42

STANDARD COMMUNICATIONS RADIOS
Horizon 29-23 CH.
Horizon 29-40 CH.
Tune-Up ..... 1 / 42

STARFIRE RADIOS
STARFIRE DX
Tune-Up ..... 1 / 41
Variable Adjustments ..... 1 / 65

STEREOSONIC RADIOS
2300
2301
2302
2355
2360
Tune-Up ..... 1 / 42

SUPERSCOPE (AIR COMMAND) RADIOS
CB-140
CB-340
CB-640
CBB-1040
CBR-40 AM/FM/CB
Tune-Up ..... 1 / 42

SUPERSTAR RADIOS
95
Tune-Up ..... 1 / 42
Variable Adjustments ..... 1 / 62
120 (Old Model)
Tune-Up ..... 1 / 42
Tune-Up ..... 6 / 06
120 (New Model Similar to Tristar 120)
Tune-Up ..... 4 / 05
121
10 KHz Jump Modification ..... 4 / 20
Tune-Up ..... 2 / 03
Power Modification ..... 2 / 09
Variable Adjustments ..... 2 / 33
121 (EPT 1201122 Board)
Switch Channel Conversion ..... 6 / 27
Rotary Channel Conversion ..... 6 / 28
Channel Conversion Chart ..... 6 / 28
+10 KHz Jump Modification ..... 6 / 30
Tune-Up ..... 6 / 06
Variable Adjustments ..... 6 / 35
360 (Early Model)
Tune-Up ..... 1 / 42
360FM (P8010 Chassis Board)
10 KHz Jump Modification ..... 4 / 20
Tune-Up ..... 1 / 42
Tune-Up ..... 6 / 06
Variable Adjustments ..... 1 / 64
505F
Tune-Up ..... 4 / 05
Variable Adjustments ..... 4 / 05
1700
Tune-Up ..... 1 / 42
1700B
Power Modification ..... 1 / 57
Tune-Up ..... 1 / 42
Variable Adjustments ..... 1 / 63
1700S
Power Modification ..... 1 / 57
Tune-Up ..... 1 / 42
Variable Adjustments ..... 1 / 63
2000
Tune-Up ..... 1 / 42
Variable Adjustments ..... 1 / 65
2200
Tune-Up ..... 1 / 42
Variable Adjustments ..... 1 / 65
3500
Power Modification ..... 1 / 57
Tune-Up ..... 1 / 42
Tune-Up ..... 6 / 06
3900
10 KHz Jump Modification ..... 4 / 21
Channel Conversion ..... 5 / 16
Clarifier Modification ..... 5 / 16
Power Modification ..... 1 / 57
Stock Clarifier Schematic ..... 5 / 15
Super-Slide Modification ..... 5 / 17
Supertalk Installation ..... 4 / 22
Tune-Up ..... 1 / 42
Tune-Up ..... 6 / 06
3900G
Tune-Up ..... 7 / 05

Master Index *(For Volume 1 Thru Volume 7)*

GR
Tune-Up ... 3 / 05
Variable Adjustments ... 3 / 37
JA (EPT 00JA10Z Board)
Tune-Up ... 6 / 06
Variable Adjustments ... 6 / 35
LBJ
Power Modification ... 2 / 09
Tune-Up ... 2 / 03
Variable Adjustments ... 2 / 33
Tek-505D
Alignment Layout ... 4 / 14
Channel Conv. Toggle Sw ... 4 / 11
Channel Conv. Rotary Sw ... 4 / 12
Channel Chart ... 4 / 13
Tune-Up ... 4 / 05
Variable Adjustments ... 4 / 05
Voltage Chart ... 4 / 15
Tek-506D
Tune-Up ... 4 / 05
Variable Adjustments ... 4 / 05

SURVEYOR RADIOS
1500 2600
2100 2610
2300 2620
2400 2630
Tune-Up ... 1 / 43

TEABERRY RADIOS
BIG T
FIVE by FIVE (Early) FIVE by FIVE (Late)
Tune-Up ... 1 / 43
MIGHTY T
MODEL T
Tune-Up ... 1 / 43
RACER T (23 CH)
RACER T (40 CH)
Tune-Up ... 1 / 43
STALKER 3
STALKER I
STALKER II
Tune-Up ... 1 / 43
STALKER IV
Tune-Up ... 1 / 43
Variable Adjustments ... 4 / 49
STALKER V
STALKER VIII
Tune-Up ... 1 / 43
STALKER IX
Channel Conv(See Cobra140GTL) ... 2 / 27
Clarifier Mod. (See Cobra140GTL) ... 2 / 27
Tune-Up ... 1 / 43
Variable Adjustments ... 4 / 49
STALKER IX (Export)
Power Modification ... 1 / 58
Tune-Up ... 1 / 43
STALKER XV
Channel Conv(See Cobra142GTL) ... 2 / 27
Clarifier Mod.(See Cobra 142GTL) ... 2 / 27
Channel Conv. w 11.1125 Xtal ... 3 / 12
Super Slide Conversion ... 3 / 14
Tune-Up ... 1 / 43
Variable Adjustments ... 3 / 38
STALKER XX
Tune-Up ... 1 / 43
Variable Adjustments ... 4 / 49
STALKER XX (Export)
Tune-Up ... 1 / 43
T
Tune-Up ... 1 / 43
T BEAR
Channel Conversion ... 2 /15-17
Power Modification ... 1 / 58
Super-Talk Installation ... 3 / 28
Tune-Up ... 1 / 43
T CHARLIE (40 CH)
Tune-Up ... 1 / 43
T COMMAND
Channel Conversion ... 2 /15-17
Power Modification ... 1 / 58
Tune-Up ... 1 / 43
T CONTROL
Tune-Up ... 1 / 43
T DISPATCH
Channel Conversion ... 2 /15-17
Tune-Up ... 1 / 43
T SCOUT
Tune-Up ... 1 / 43
TELE T
Tune-Up ... 1 / 43

TITAN T
Channel Conversion ... 2 /15-17
Tune-Up ... 1 / 43

TEK RADIOS
HR-3950
Tune-Up ... 3 / 05
Variable Adjustments ... 3 / 38

TENNA RADIOS
A0902
Tune-Up ... 1 / 44
10901
Tune-Up ... 1 / 44
Variable Adjustments ... 5 / 47
10902
11302 (AM/FM/CB)
Tune-Up ... 1 / 44

TEXAS STAR RADIOS
2100
Power Modification ... 1 / 58
Tune-Up ... 1 / 44

THUNDER RADIOS
2000
Tune-Up ... 1 / 44
Variable Adjustments ... 1 / 65

TRAM RADIOS
D12
Tune-Up ... 1 / 44
D42
Channel Conversion ... 3 / 20
Tune-Up ... 1 / 44
D64
Tune-Up ... 1 / 44
D80
Channel Conversion ... 3 / 18
Tune-Up ... 1 / 44
D201
Tune-Up ... 1 / 44
D300
Channel Conversion Toggle Sw ... 4 / 23
Channel Chart ... 4 / 24
Clarifier Conversion ... 4 / 25
Tune-Up ... 1 / 44

DIAMOND 40
DIAMOND 60
Tune-Up ... 1 / 44
TITAN II
TITAN IV
XL
XL-5
Tune-Up ... 1 / 44

TRI MAX RADIOS
220
Tune-Up ... 6 / 06
Variable Adjustments ... 6 / 35

TRISTAR RADIOS
120
Power Modification ... 1 / 58
Tune-Up ... 1 / 44
240 (Old Model)
Tune-Up ... 1 / 44
Variable Adjustments ... 4 / 49
240 (New Model)
Power Modification ... 1 / 58
Tune-Up ... 1 / 44
340 (Old Model)
Tune-Up ... 1 / 44
340 (New Model)
Power Modification ... 1 / 58
Tune-Up ... 1 / 44
727
Tune-Up ... 1 / 44
Variable Adjustments ... 1 / 62
747
Tune-Up ... 1 / 44
Variable Adjustments ... 1 / 64
777
Tune-Up ... 1 / 44
Variable Adjustments ... 1 / 65
797
Tune-Up ... 1 / 44
Variable Adjustments ... 1 / 65

848
Tune-Up ... 1 / 45
Variable Adjustments ... 1 / 65

TRS CHALLENGER RADIOS
460
Tune-Up ... 1 / 45
600
Tune-Up (Correction) ... 3 / 05
730
Tune-Up ... 1 / 45
Variable Adjustments ... 6 / 35
850
Tune-Up ... 1 / 45
1200
Tune-Up ... 1 / 45
Variable Adjustments ... 3 / 38
1400
Tune-Up ... 1 / 45

TRUETONE RADIOS
CYJ4732A-77
Tune-Up ... 1 / 45
CYJ4832A-87
Channel Conversion ... 2 /11-14
Tune-Up ... 1 / 45
CYJ4834A-87
Channel Conversion ... 2 /11-14
Tune-Up ... 1 / 45
Variable Adjustments ... 5 / 47
CYJ4837A-87
Tune-Up ... 1 / 45
CYJ4862A-87
Channel Conversion ... 2 /11-14
Tune-Up ... 1 / 45
DC4530
DC4672
Tune-Up ... 1 / 45
MCC4370A-57
MCC4434A-57
MCC4434A-67
MCC4434B-67
MCC4532A-47
MCC4630A-67
MCC4635A-67
MCC4724A-77
MCC4726A-67
MCC4760A-67
MCC4770
Tune-Up ... 1 / 45

MIC4350A-37
MIC4434A-67
MIC4622A-67
MIC4726A-67
MIC4730A-67
MIC4731A-67
MIC4733A-67
Tune-Up ... 1 / 45
MIC4737A-67
MIC4739A-67
Tune-Up ... 1 / 46

UNIDEN RADIOS
(See PRESIDENT / UNIDEN

UNIC RADIOS
CB-40
Tune-Up ... 1 / 46
Variable Alignment ... 4 / 51
CB-50
Tune-Up ... 1 / 46
Variable Alignment ... 4 / 51
RV-40
Tune-Up ... 1 / 46

UNIMETRICS RADIOS
DOLPHONE
MAKO-I
MARLIN-I
PURPOISE I
SEA-HORSE I
STINGRAY II
Tune-Up.(All the Above) ... 1 / 47

USACO RADIOS
U900CB
Tune -Up ... 3 / 05

UTAC RADIOS
MICRO-MINI 23
Tune-Up ... 1 / 47
STUDIO 4000
SUPER TINY 23
TR-18M
TRX-30
TRX-400
TRX-500
TRX-2000
Tune-Up.(All the Above) ... 1 / 47

VECTOR RADIOS
770
790
VECTOR IV
VECTOR VI
VECTOR VII
VECTOR IX
VECTOR X
Tune-Up(All the Above) ... 1 / 47

WARDS RADIOS
GEN-680A
Tune-Up ... 1 / 48
GEN-696A
Tune-Up ... 1 / 48
Tune-Up (Correction for Old Voll) ... 3 / 05
GEN-702A
GEN-716A
Tune-Up ... 1 / 48
GEN-719A
GEN-730A
GEN-774A
GEN-775A
GEN-828A
Tune-Up ... 1 / 48

WELLS RADIOS
W-705
Tune-Up ... 1 / 48

WESTPOINT RADIOS
CB-9000
Tune-Up ... 1 / 48

WHISTLER RADIOS
700
Tune-Up ... 2 / 03
900
Tune-Up ... 1 / 48

XTAL RADIOS
XCB-4
XCB-5
XCB-6
XCB-7
XCB-11
XCB-12
Tune-Up(All the Above) ... 1 / 48
XCB-71
Tune-Up ... 1 / 48
Variable Adjustments ... 4 / 51
XCB-23A
XCB-28
XCB-880
XSSB-4
XSSB-10
Tune-Up(All the Above) ... 1 / 48

YOSAN RADIOS
JC-2204
Channel Conversion ... 6 / 24
Channel Conversion Chart ... 6 / 25
Tune-Up ... 6 / 06
Variable Adjustments ... 6 / 35

ZODIAC RADIOS
M-5023
M-5026
Tune-Up ... 1 / 49